TE GEMINI
OWNER HANDBOOK
Sedan

HOLDEN GMH

P/N. 92012150

Vehicle Identification Certificate

Owner's Name Mr. Mrs. Miss .....

Address .....

Town & State ..... Postcode.....

Reg. No. ..... Model Name.....

V.I.N. ..... Eng. No.....

Selling Dealer's Stamp & Signature .....

Date of Acquisition.....

10/79

Message from GMH

Thank you for choosing Holden.

Your new Gemini is the product of many years research and planning. We are very pleased and proud of the result — as we are sure you will be.

To understand your new car fully, please take the time to read through this manual and keep it in the car at all times for quick reference.

Full understanding of your car's performance, warranty and maintenance procedures will add greatly to your enjoyment. On behalf of all here at GMH, may we wish you and your Gemini many years of happy motoring.

This handbook contains important information necessary for the good performance and maintenance of the vehicle. Please leave it in the vehicle at the time of resale to assist the new owner.

All illustrations and specifications contained in this handbook are based on the latest product information available at time of publication approval. The right is reserved to make changes, at any time, without notice, in prices, colours, materials, equipment, specifications and models, and to discontinue models. Check with your Holden Dealer for complete information.

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Running In

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Safety Checklist

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Starting & Operating

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Emission Control

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Appearance Care

Section 1:

Important

Fuel requirements

Your Gemini is designed to run on clean fuel of at least 89 octane. The major oil companies produce standard petrol at 89 octane and super at 98 octane. Use of a fuel too low in anti-knock property will cause pre-ignition. If this occurs have your car checked — continual pre-ignition may damage the engine and is not covered by your warranty.

Running In

These days, there's no need to follow a rigid running-in schedule. However, if you observe a few simple points during the first few hundred kilometres of driving, you will add to the car's future performance and economy.

For the first 500 kilometres, don't go over 80 km/h. Up to 1500 kilometres, avoid driving at any one speed — either slow or fast — for any length of time.

Include some higher speeds in your driving. This helps prolong the life of parts and helps with fuel and oil economy. But never drive at high speed until the engine is thoroughly warm.

Full throttle acceleration is not recommended before the car has done 3000 kilometres.

Fuel Economy

How you drive, and where you drive all have an effect on your fuel bill. The following pointers will help you improve your fuel economy.

Avoid:

Hard Acceleration.

Stop-Start Driving. Plan your trips ahead.

Excessive Speed. You could save up to 20% on your fuel bill by driving at 80 km/h instead of 110 km/h.

Engine Idling. Turn the engine off while you wait.

Hard Driving in Built-up Areas. Fast driving up to stopping points wastes fuel because energy is dissipated as heat under hard braking. Additionally energy in the form of fuel is needed to accelerate again.

Check:

Air Cleaner Element. A dirty air cleaner element reduces engine efficiency. Replace it at the required intervals.

Engine Tuning. An out of tune engine cannot give good fuel economy.

Tyre Inflation. Under inflation wastes fuel.

Wheel Alignment. Incorrect alignment makes the front wheels drag and puts an extra load on your engine.

Section 2:

Before driving your new Gemini — Safety Checklist

Before getting in

Check that the windows, mirrors and lights are clean.

Note tyre inflation.

If you intend to reverse, check that the area behind you is clear.

Before driving off

Be sure you understand your car and know how to operate it safely.

Close and lock all doors.

Position your seat for comfortable driving.

Adjust both rear vision mirrors.

FASTEN SEAT BELTS.

Check that the warning indicators light up when you turn the key to start the engine.

Release the parking brake.

Caution: Never leave loose articles inside the car — they may become dangerous projectiles if you have a collision or stop suddenly.

Maintenance for safety

The following items require regular attention in the interests of safety. If anything goes wrong with any one of them, an authorised GMH Dealer will help you.

- BRAKES.
- HORN.
- ALL LIGHTS.
- REAR VISION MIRRORS.
- SEAT BELTS.
- GLASS AREAS.
- EXHAUST SYSTEM.
- WINDOWS.
- STEERING & WHEEL ALIGNMENT.
- WINDSHIELD WIPERS & WASHERS.
- TYRES.

Keys and Locks

Code Number

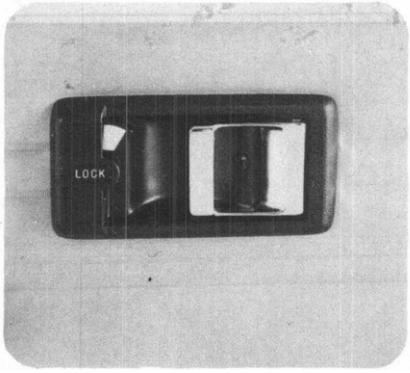
This is stamped on the key-shaft, and should be recorded immediately. If your key is lost, duplicates can be ordered from your GMH dealer by quoting the code number. (It's not a bad idea to have a spare key anyway.)

Keys

The one key operates all locks — ignition, doors, glove-box, boot and fuel cap.

Locking from the inside

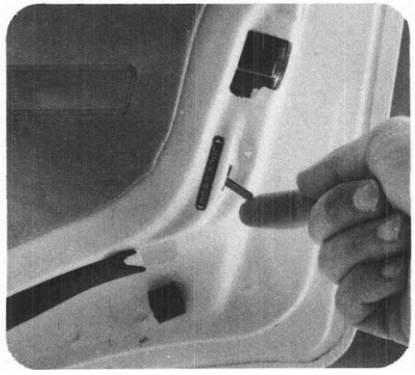
To lock, push in the upper section of the locking button. To unlock, push in the lower section of the locking button.



Rear Door "Child-Proof" lock

This lock is on both rear doors. To operate it, slide the lever up as far as it will go and close the doors. The doors cannot now be opened from inside, regardless of the locking button position.

To unlock, open the door from outside and slide the lever back down.

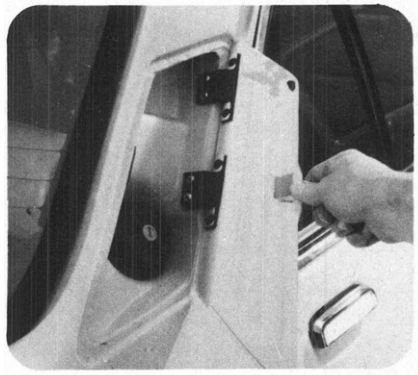


Fuel cap lock

The fuel filler is located behind the air extraction vent on the drivers side of the car.

To remove the cap, turn the key anti-clockwise, then turn the cap in the same direction till it comes free.

To replace it, fit it on to the neck of the filler, press down and turn the cap clockwise. Turn the key clockwise to lock.



A Hint

Door locks may ice up in cold weather. If this happens, warm the key before you insert it. You may have to do this several times.

Door Locks
Opening with key

To unlock the front doors from outside, insert the key and turn it towards the back of the car.

To open, lift the door handle up and out.

Locking from the outside
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With the door open, shift inside locking button to "Lock". Then close the door holding the handle upwards.

Note: Doors on all models have a free-wheeling lock mechanism. This means that the doors cannot be opened from the outside or inside unless the locking button is in the "Unlock" position.

Luggage compartment

To unlock, turn the key clockwise. The lid opens automatically. The compartment locks automatically when pushed shut.

Glove compartment

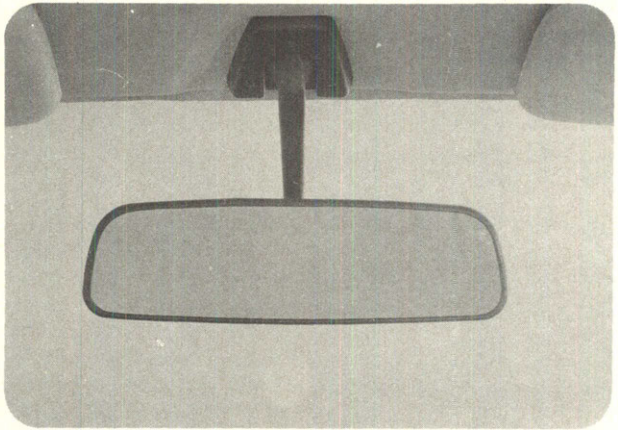
To lock, turn the key towards the passenger side door one quarter of a turn.

To unlock, turn the key towards the steering wheel, one quarter of a turn, withdraw the key, then press in the button.

Rear Vision Mirrors

Inside Mirror

This is shatter-resistant, and mounted in such a way that it can be knocked out in case of accident. This lowers the chance of injury.

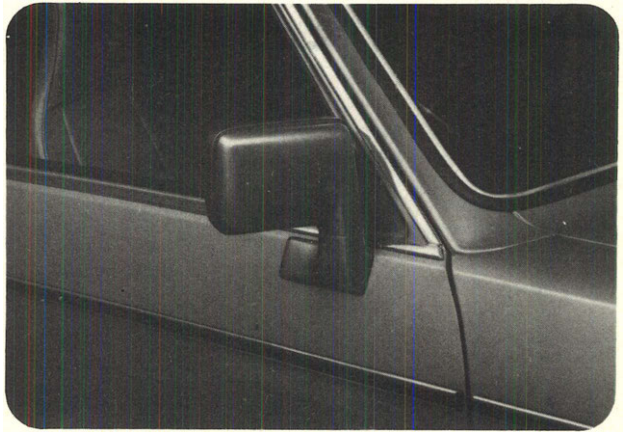


Outside Mirror

This is mounted outside the driver's door and enables you to observe traffic in the next lane. It is designed to deflect out of harms way should you steer too close to an obstruction.

To adjust this mirror correctly, check it whilst seated in the normal driving position.

Where a passenger side rear vision mirror is fitted, care should be taken to adjust this correctly for the driver's line of vision from the normal driving position.



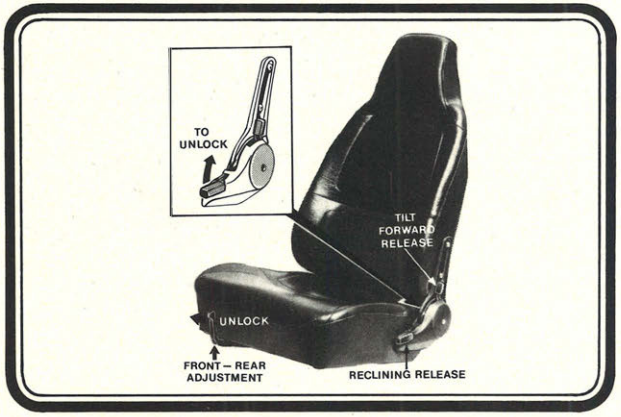
Front Seat Adjustment

You can move each front seat either back or forward to find the position most comfortable for you.

The control lever is at the lower front centre of the seat. It moves to the right.

Reclining Back Adjustment

The control lever is at the bottom of the seat back on the outer side of the seat. Raise the lever and adjust the angle. It will lock into place automatically once the lever is released.



Window Controls

Door Windows

All door windows wind up and down.

Rear Quarter Windows

To open, pull the catch up and in. Push the centre of the catch to hold the window open.

Seat Belts

Study this section carefully. Your life may depend on it. In particular, study the photographs showing the correct way to wear seat belts.

The lap belt must be positioned over the hip area, not over the tummy.

Emergency-Locking Retractor Belt

This type of belt system allows you to move around a bit while the car is travelling normally.

Should you apply the brakes firmly, or hit a solid object, the belt will lock immediately.

To test: Drive at 3 km/h then brake suddenly. The belt should lock. It will also lock if it is suddenly pulled out any extra length.

To test: Hold the belt tightly and give it a sudden jerk. It should lock.

Carry out both tests often.

To adjust: Settle yourself comfortably, then bring the metal "tongue" across the body and snap it into the buckle. After fastening, settle the belt by running your hand under the belt, starting at the hip, going across to the buckle, then up under the sash. Any extra belt length will retract automatically.

Non-Retractor Lap/Sash Belts

To adjust: Settle yourself comfortably. Clip the belt on firmly. To lengthen: tilt the belt adjuster as shown and pull the belt from just below the finger grip bar. To shorten: tilt the belt adjuster and use the finger grip bar to pull the belt through the belt adjuster.

Belt Storage

A hook on the belt adjuster keeps the belts away from doors when they're not in use.

Lap-type Belts

These adjust in the same way as the non-retractor type belts.

Belt Storage

When not in use keep the belts fastened.

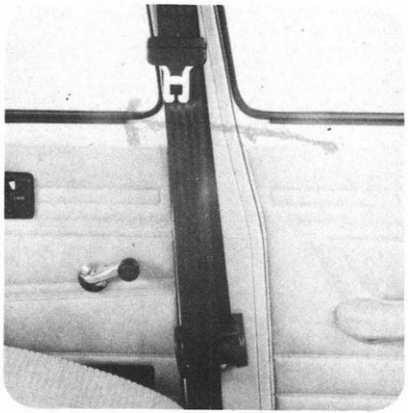
Safety Hints:

Check seat belts regularly. Your GMH Dealer will do this as part of normal Guardian Maintenance.

Adjust seat belts firmly. A loose belt is no help at all. Seat belts must be replaced if they have been worn during a severe impact — even if there's no obvious damage.

Don't wear a belt with twisted straps.

Don't ever put a seat belt around a child being nursed on the lap.



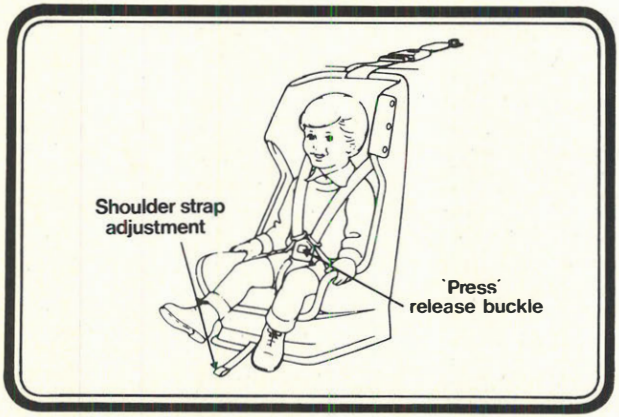
Infant & Child Restraints

Your Gemini is provided with anchorage points for child restraints — see diagram — and your GMH Dealer will be more than happy to advise you about the various types available.

Children should be belted in at all times.

Never use a child restraint as an adult seat belt — it will not take the extra weight.

If your child honestly can't use a seat belt and must stand, the safest place is behind the front seat. This is not recommended.

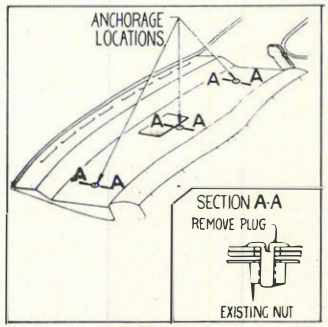


In a car Without Infant or Child Restraints

On rare occasions it may be necessary to travel with a child in a car without approved infant or child restraints. If so, please heed the following precautions.

INFANTS UNABLE TO SIT BY THEMSELVES should be carried in a padded, covered bassinet placed **across** the back seat. Strap this in tightly with the two regular seat belts.

CHILDREN ABLE TO SIT UP should be belted with the regular seat belt. If the sash part rubs on the child's neck or face, move the child towards the centre of the car. If this doesn't work, the child should be lap-belted on the back seat. NEVER allow a child to stand or kneel on any seat.



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Care of Seat Belts

Clean belts only with a solution of mild soap and lukewarm water. Never use bleach. Replace the belts if they become frayed or damaged.

Section 3:

Starting & Operating

EXHAUST GAS WARNING

Carbon Monoxide Poisoning

Exhaust gases contain carbon monoxide which can cause unconsciousness and even death.

And you could accidentally breathe them in if your exhaust system on your car is faulty.

Have the car checked thoroughly each time it is raised for servicing. If you notice a change in exhaust noise, or if the back of your car is damaged, take it to your GMH Dealer for inspection.

If you must drive with a faulty exhaust, drive with all the windows open.

Danger

Don't ever sit in a parked car with the engine running for any length of time. And don't leave the kids in there either.

Don't run the engine in the garage any more than necessary to move the car.

If this should be necessary — say for an engine check — ventilate the car by closing the heat or flow through ventilation outlets and turning the fan onto 3.

If you must travel with the boot open, close all windows, fully open the ventilation system and do not exceed 50 km/h unless necessary.
And take it easy on the accelerator.

Exhaust Pollution

Your Gemini is equipped with several features designed to minimise exhaust pollution.

Steering Column Controls

Ignition Lock

This is an anti-theft lock and is on the right side of the steering column. It has four positions.

Lock: This is the normal parking position, and locks the ignition and the steering wheel when the key is removed.
To turn the key from "ACC" to Lock, depress the button located underneath the lock.

Acc: This allows you to use the electrical components — lighter, radio etc. — when the engine is not running.

On: All systems go: the normal running position.

Start: This starts the engine. The key will return to **On** when released.

Leave the key in the On position at all times while the car is moving.

Windshield Wipers & Washers

This control is on the passenger side of the steering column and operates when the ignition switch is on **On** or **Acc.**

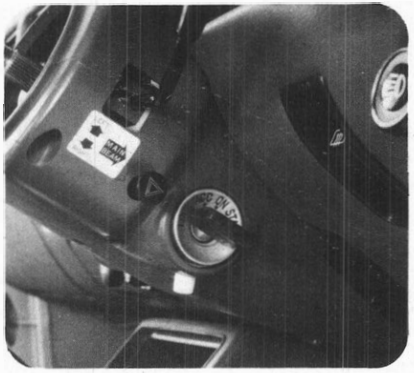
Wipers

These can operate at either low or high speeds. Simply turn the switch towards the windshield until the speed you want is in line with the white dot.

To stop, turn the switch back to Off.

Washers

These are worked by depressing the button on the end of the wiper control.



Turn Signal/High Beam Switch

This is the handle on the right of the steering column.

Turn Signals

To indicate turning left, push the stalk up.

To indicate turning right push the stalk down.

The signal cancels automatically when the turn is completed. If the turn signal lights don't flash, or if you can't hear them clicking, or if they start to flash slower or faster than usual — have them checked right away.

High Beam

Move the stalk toward the steering wheel for low beam.

Move it away from the steering wheel for high beam.

A blue indicator light will then glow in the instrument cluster.

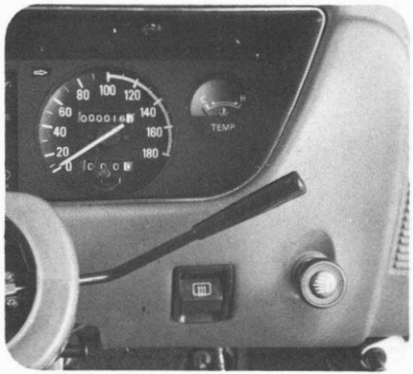
To flash-signal in high beam move the handle towards the steering wheel a bit further than for low beam.

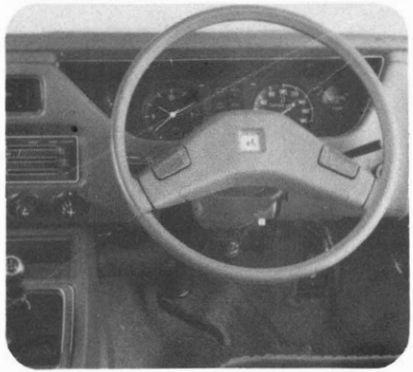
Hazard Warning Switch

This is the knob next to the ignition switch. When stopped in an emergency situation, pull the knob out. This makes all four indicator lights flash continuously, and both turn indicators will flash when on.

Horns

Your Gemini has both a high note and a low note horn. The horn is operated by pressing either of the two buttons in the steering wheel.





Starting and Driving

The following suggestions are for starting and driving and should be followed if you are to get the best out of your car.

Parking Brake

This should be firmly applied, and released only after you have started up.

Manual Transmission

Press the clutch in and check that the car is in Neutral.

Automatic Transmission

Check that the selector lever is in either N or P. The engine will not start if it is in any other position.

Engine

Cold Starting

Your Gemini engine has an automatic choke system.

Before starting a cold engine, press the accelerator right in two or three times — this sets the choke system and injects fuel.

Now turn the key to START.

If the car has been standing for a few days, it may be necessary to repeat this procedure several times before the engine starts.

After the engine starts run the engine at fast idle for about 30 seconds before moving off.

The choke system shuts itself off automatically.

Flooding

Pumping the accelerator can cause flooding which will prevent the engine from starting.

If this occurs, press the accelerator down to the floor and hold it there while holding the key in the START position. When the engine starts, allow the accelerator pedal to come up slowly.

Warm Starting

During summer, or when your engine is warm, the choke system operates only briefly — if at all.

To start — press the accelerator pedal to the floor, let it come up slowly, then turn the key to START.

Idle the engine in Neutral for about 30 seconds before driving off.

Air Preheat

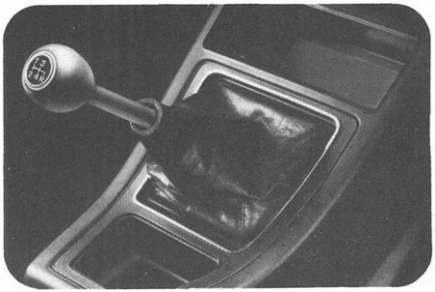
On the air cleaner you will find a valve which can be manually operated. Normally, this should be set at the Summer position. However if the weather is cold, or if the engine is running roughly due to carburettor icing, it should be set to Winter position.

Transmission Controls

4 Speed Manual Transmission

This system has four fully synchronised forward gears and a non-synchronised reverse gear.

The gear selection pattern is indicated on the knob of the gear lever.



First Gear — Low: This is synchronised so can be used at speeds up to 25 km/h to avoid overloading the engine.

Second Gear — Low Intermediate: Use this gear at speeds up to 50 km/h when driving in traffic. It is also useful on steep hills.

Third Gear — High Intermediate: Use this gear for acceleration and checking in the speed range 50-80 km/h.

Fourth Gear — High: This is the normal cruising gear at speeds down to 50 km/h. A lower gear should be selected for acceleration or checking.

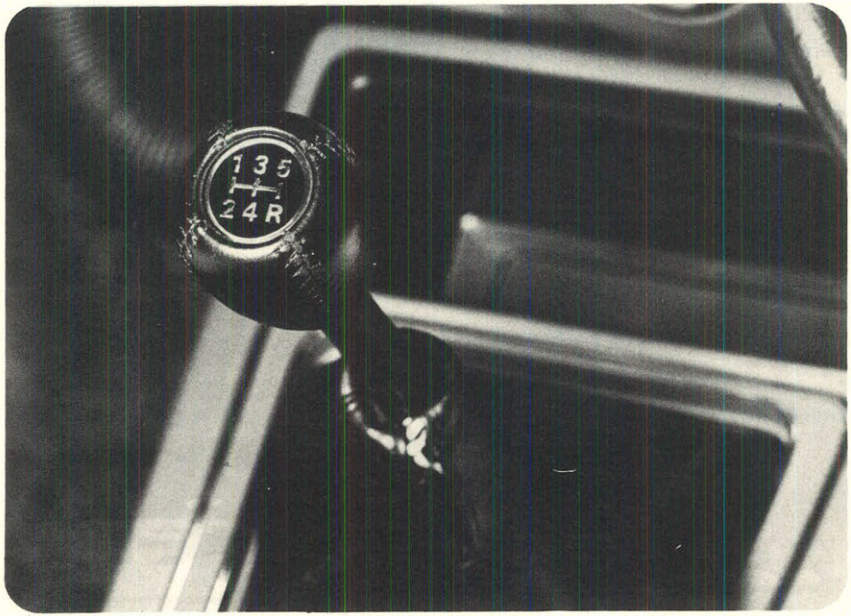
Reverse Gear: This gear must never be engaged unless the car is stationary. A slight pause between pushing the clutch in and moving into gear is desirable. The lever knob must be pulled against spring pressure to pass into the R gate path.

Back-Up Lights
If the engine is on, these will operate whenever Reverse is selected.

5 Speed Manual Transmission

This system has five fully synchronised forward gears and a non-synchronised reverse gear.

The gear selection pattern is indicated on the knob of the gear lever. First, Second, Third, Fourth and Reverse gears operate as described under 4 Speed Manual Transmission. (page 19)

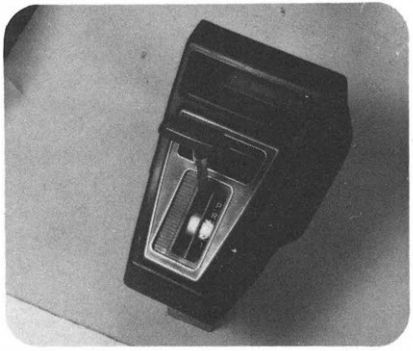


Fifth Gear — Overdrive: Use this gear for highway cruising above 80 km/h for fuel economy but use fourth gear when acceleration or retardation is desired.
NOTE: The lever knob must be pulled against spring pressure in order to pass into the overdrive position (fifth gear).

Automatic Transmission

P — PARK
R — REVERSE
N — NEUTRAL
D — DRIVE
2 — SECOND GEAR
1 — LOW GEAR

The engine will not start unless the selector is in either P or N.
Select your "gear" — normally D — after the engine is running.
Going down through the "gears" from P to 1 — press the button to move from P to R. You can go through to N and D without pressing the button. Press it again to go to 2 and again to go to 1.



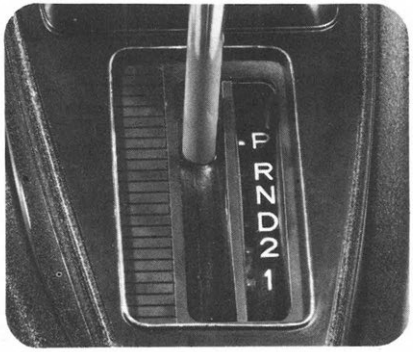
Going up from 1 to P — you can move from 1 to 2 to D to N without pressing the button.
Press it for either R or P.

What the Positions are for:

P — Parking. Always use the parking brake as well. Your car may be started in this position.

R — Reverse. Your car must be stationary before you select this position.

N — Neutral. This position can be used to start the car. It must be used if the car is being towed on two wheels by a tow truck.



D — Drive. This is the normal driving position and allows for adequate acceleration for all but the most crucial driving situations.

2 — Second. This may be used going down moderately steep hills. It will give a slight braking action without the use of the brakes.
Don't use at speeds over 100 km/h.

1 — First. This gives maximum braking for steep hills. Shift back to 2 or D when you've negotiated the difficult bits. Don't use at speeds over 65 km/h.

Back-Up Lights
If the engine is on, these will operate whenever Reverse is selected.

Passing

When the accelerator is pressed down hard, the shifts shown below will normally occur automatically. Speeds given may vary depending on type of rear axle and tyres.

Automatic Driving Don'ts

- Don't rev the engine with the brakes on in either 1, 2, D or R. This will overheat the transmission.
- Don't rev the engine to hold it on a slope. Use the brakes.
- Don't move into either R or P unless the car has stopped.
- Don't ever coast the car in N — this lessens your control and braking power.

SELECTION	SPEED RANGES	EFFECT
SHIFT LEVER IN D		
Over	110 km/h	No Change
Under	95 km/h	Changes to Second Gear
Under	50 km/h	Changes to First Gear
SHIFT LEVER IN 2		
Over	65 km/h	No Change
Under	50 km/h	Changes to First Gear
SHIFT LEVER IN 1		
Don't Exceed	65 km/h	No Change

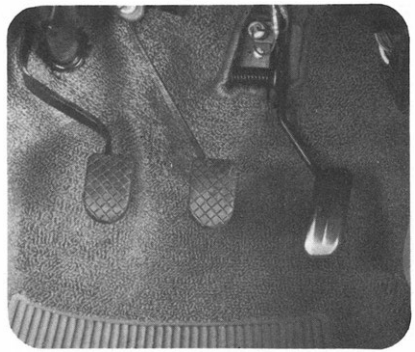
Floor Controls

Brake System

The braking system on your Gemini is actually two separate systems; one operating the front wheels, the other operating the back wheels.

So, if either system is faulty, you can still brake the vehicle, with a little extra pedal effort.

After you've been driving your vehicle for a while you will become used to how the brakes feel when they are operating normally. If you notice any change in this "feel", have them checked.



Front Disc Brakes

These brakes adjust themselves automatically.

The system also includes a valve which prevents the wheels locking if you have to brake in any emergency.

Rear Drum Brakes

These self adjust every time you brake whilst moving in a forward direction.

If the brake pedal feels "sloppy" drive the vehicle backwards and forwards a few times, and apply the brakes firmly. This should bring the brakes back to normal.

Power-Assisted Brakes (where fitted)

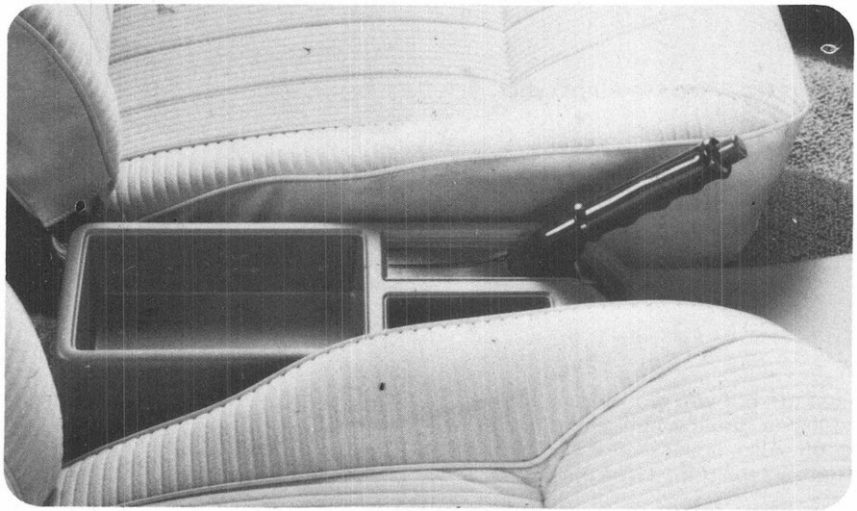
These will still work with the engine switched off, but you would have to brake much harder than usual. To be safe — never run downhill with the engine off, and never coast with the engine off. Also, never have the vehicle towed on 4 wheels without a rigid connection between the two vehicles. A tow truck is safer.

Parking Brake

This is the lever between the two front seats.

To apply: pull the lever straight up. Don't touch the button on the end.

To release: pull the lever up a bit then press in the button. Keep your finger on the button and lower the lever.



Accelerator Pedal

This regulates engine speed and driving speed.

Clutch Pedal

Never attempt to change gears without pressing the clutch in.

Instrument Panel Controls & Dials

Light Switch (Number 1)

This switch controls all your lighting and lamps.
Push it fully in: this switches off all lights.
Pull it out to the first stop: this switches on the Parking, Tail, Number Plate and Instrument Panel lighting.
Pull it right out: all lights on.
Brightness of the instrument panel light and the gear console light on automatics, is controlled by rotating the light switch.

Heated Rear Window Switch (Number 2)

When this is switched on a reminder light will glow on the panel.
Switch it off as soon as the fogging has cleared.

Hazard Warning Switch (Number 3)

Pull out to operate — see page 17.

Driving Lights (Number 4) where fitted

The lights operate only when the headlights are on high beam.

Fan (Number 5)

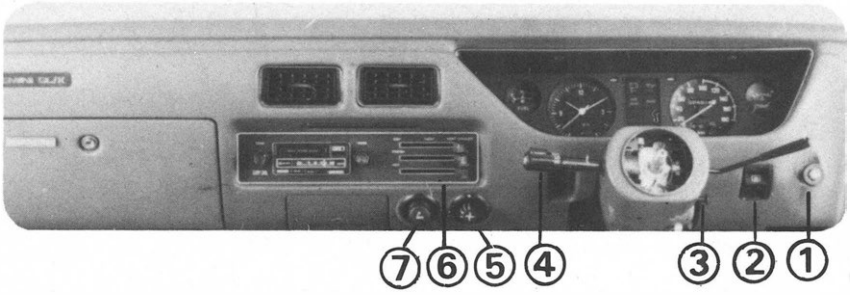
See page 31 for operating instructions.

Heater/Defroster or Air Conditioning Controls (Number 6)

The use of these controls is covered on page 30.

Cigarette Lighter (Number 7)

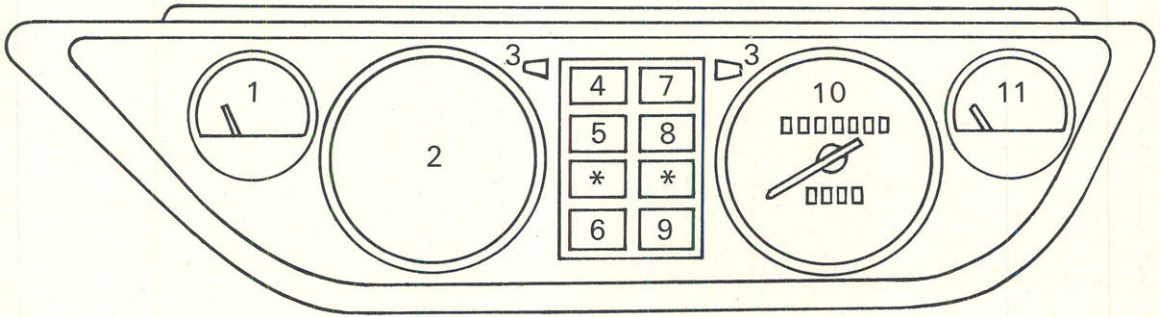
To use, press the knob in. It will pop back when it is ready.



Instrument Panel

1. Fuel Gauge
2. Clock or Tachometer
3. Turn Signal Indicators
4. Generator Warning Lamp
5. Park-Brake "On" Indicator
6. Rear Window Demister "On" Indicator
7. Oil Warning Lamp
8. Brake Failure Warning Lamp
9. Hi-Beam Indicator Lamp
10. Speedometer and Tripmeter
11. Temperature Gauge.

* Spares.



Instrument Dials & Lights

DIALS

Fuel Gauge (Number 1)

When the ignition is on, this gauge indicates the amount of fuel in your tank. "F" for Full, "E" for Empty.

Clock (Number 2)

To adjust the time setting, pull out the knob at the bottom and turn.

Speedometer & Odometer (Number 10)

The odometer is the top set of numbers on the speedo face. They indicate the number of kilometres your car has travelled.

Below this is a trip meter — useful for recording specific distance journeys. To bring it back to zero, push in the reset knob and turn. At the end of the trip it will tell you how many kilometres you've covered.

Temperature Gauge (Number 11)

When your engine is running at normal temperature, the needle will be in the area marked by the two lines. If it moves to the H, you have an overheating problem. Stop the engine and let it cool down before trying to fix it. For instructions, see page 79.

LIGHTS

Turn Signal Lights (Number 3)

These flash when you use the turn indicator or the hazard switch.

Generator Light (Number 4)

This lights up when the engine is turned on and goes out as soon as it starts. Should it remain on, it indicates a fault which must be corrected.

Parking Brake Light (Number 5)

This stays on until the brake has been properly released.

Rear Window Demister "ON" Light (Number 6)

This glows when the demister is on.

Oil Pressure Light (Number 7)

If this light stays on after the engine is running, and warm, it indicates a fault which should be corrected.

Brake Failure Warning Light (Number 8)

If this lights up there may be something wrong with the braking system. Pull up immediately and do not drive on unless you are sure you can do it safely.

High Beam Light (Number 9)

This glows when the headlights are on high beam.

Radio

Your radio has been made especially for GMH by Philips, and when fitted as standard equipment is covered under the GMH New Vehicle Warranty.

On/Off switch and volume control

Push this in to turn the radio on. A second push will turn it off. Turn the knob to alter the volume.

Tuning control

This can be used at any time and will not affect the radio. The radio will still be able to recall pre-selected stations.

Pushbuttons

These allow you to tune to any of five pre-selected stations without having to twiddle the tuning knob.

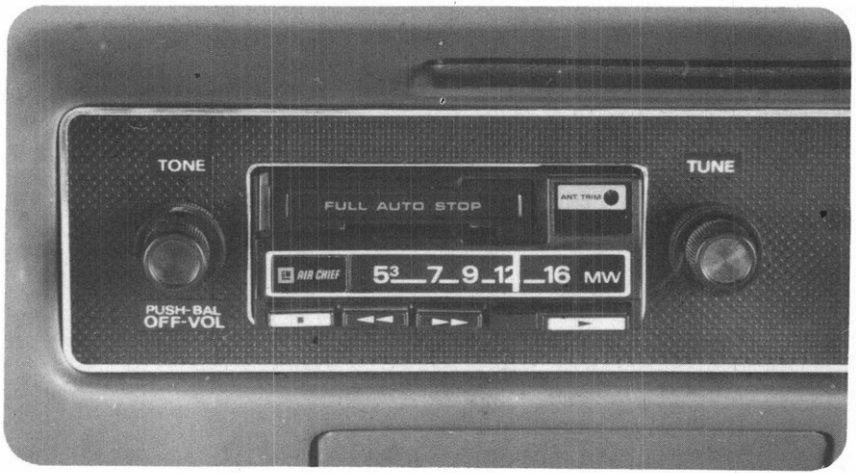
To re-set the pushbuttons

Turn the radio on and turn the volume up louder than normal. Unlock the pushbutton you wish to reset by pulling out firmly.

Now use the manual tuning knob to tune to the station you want. Take time to tune accurately and then push in the pushbutton until it locks.

Tone control

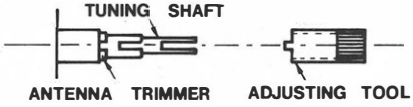
Bass or treble tone can be adjusted by turning the outer volume knob to the right or left.



Radio and Cassette Tape Player

Antenna adjustment

The antenna must be adjusted to suit your particular area.
Extend the antenna fully, then retract the inner sections to about half height.
Tune the radio to a weak station at about the centre of the dial and adjust the clarity and strength of the reception by using the special tool provided.



Your radio/cassette tape player has been especially made for GMH by Philips, and when fitted as standard equipment is covered under the GMH New Vehicle Warranty.

Radio operation

The combination radio and cassette player differs from the radio only unit and does not have push button tuning.

On/Off switch and volume

Control operation is the same as for the radio only unit as is tone control.

Balance control

Speaker balance is obtained by pushing the knob in and adjusting to either right or left.

To play a cassette

Turn the radio on.
Now, insert the cassette with the full reel towards the front — the radio will switch off when the cassette is fully in.

Press the Play button right in and adjust volume, tone and balance to suit.

To play side 2, turn the cassette over and re-insert.

Stopping the tape

The player will stop automatically at the end of the tape, or at the end of fast forward and rewind operations.

To stop the tape at any other time, press the stop/eject button.

Cassette tapes

For best results use only C60 or C90 tapes. Store them in a cool place, away from direct sunlight and magnetic objects. To loosen a tape tap the cassette lightly on a table top a few times.

To tighten a tape insert a pencil or similar object in the spindle hole and turn it to take up the slack.

Note: Make it a habit to eject tapes when you turn off the ignition. Leaving a cassette in the PLAY position will cause a flat spot on the pressure roller. This distorts the sound.

Ventilation System

Your Gemini has a flow-through ventilation system for your comfort. Under reasonable conditions, it shouldn't be necessary to open the windows at any time.

Fresh air comes into the car through the grille in front of the windshield, and into the passenger area through ducts in the instrument panel.

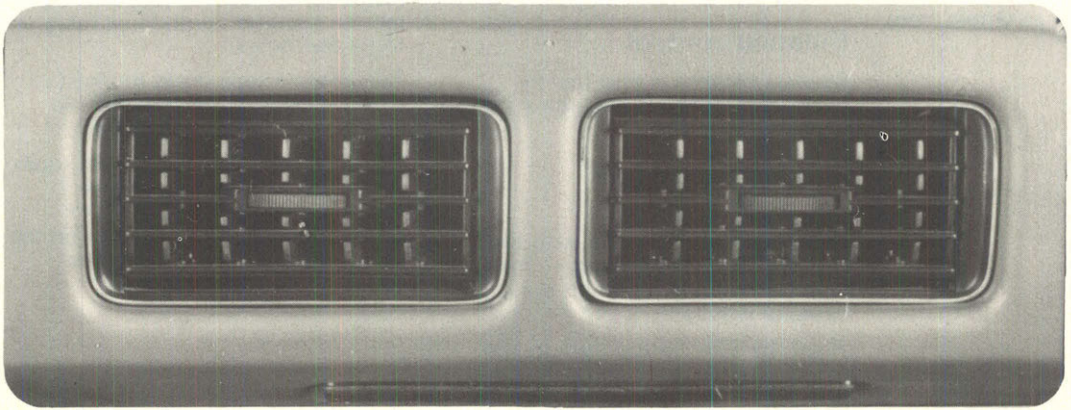
Instrument Panel Vents

These are the two in the middle of the instrument panel.

Vertical direction of air is adjusted by moving the whole grille up or down.

Horizontal direction is controlled by the knob in the centre of the grille.

A HINT: The ventilation system will not work if the bonnet grille is allowed to become covered or clogged up with leaves, snow etc. Keep it clean and uncovered.



Operating the Controls

Distribution Control Lever (top lever)

This has four positions:

DEF —In this position air is mainly directed to the windshield ducts. A small amount goes to the central floor outlets.

HEAT —In this position the windshield ducts and the floor outlets receive an equal amount of air.

VENT —This gives you cool air from the instrument panel vents and warm air. (depending on the temperature control lever) from the floor outlets. Warm feet — Cool head. For best effect in this position the centre lever should be on FRESH.

COOLER—This position directs air to the instrument panel vents.

Fan Switch

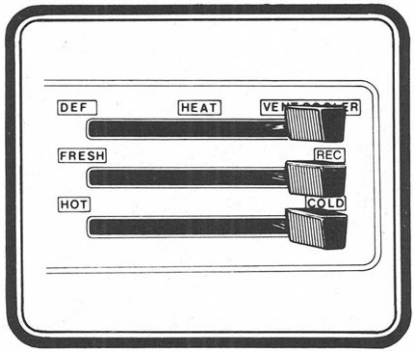
The fan is located on the instrument panel under the ventilation control panel. The fan switch has four positions 0, 1, 2, 3, for controlling fan speed in three steps, low, medium and high, there-by controlling the volume of incoming air.

Use the fan to boost air flow whenever you consider it necessary.

Air Conditioning (Optional)

To operate the air conditioner set the distribution control lever to COOLER, the air source lever to REC, the temperature control lever to COLD and select position 1 on the Fan Switch. The air flow through the instrument panel vents can be boosted, if desired, by selecting a high fan speed.

NOTE: The air source lever must be in the REC position as the system will not operate if the lever is in the FRESH position.



How to use the Ventilation System

Windshield defrosting

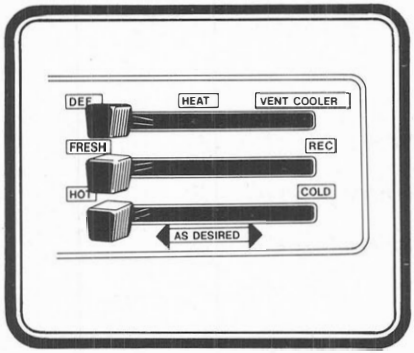
Top lever — DEF (Defrost)
Middle lever — FRESH
Bottom lever — AS DESIRED — depending on the weather.
Fan — AS DESIRED — depending on the weather.

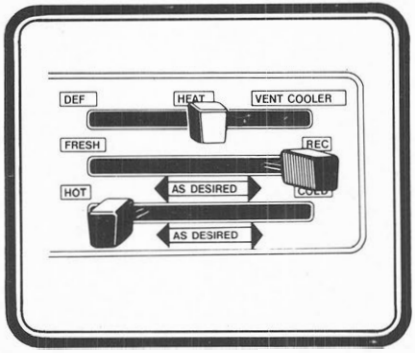
Heating

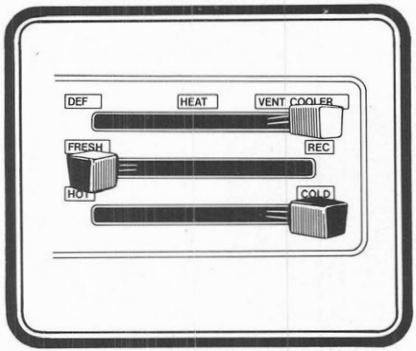
Top lever — HEAT
Middle lever — REC (recycle) or FRESH as desired.
Bottom lever — AS DESIRED.
Fan — AS DESIRED.

Ventilating

Top lever — VENT
Middle lever — FRESH
Bottom lever — COLD







Spare Wheel Storage

To remove:

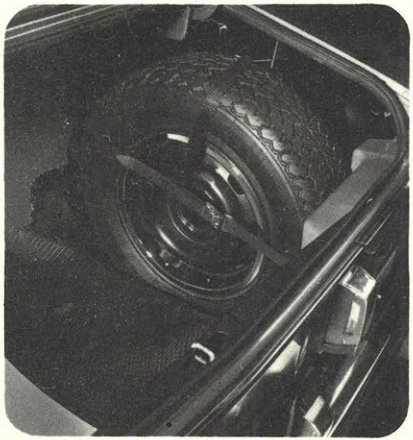
Remove the jack handle which is between the tyre and the holding strap. Release the holding strap and remove the spare wheel.

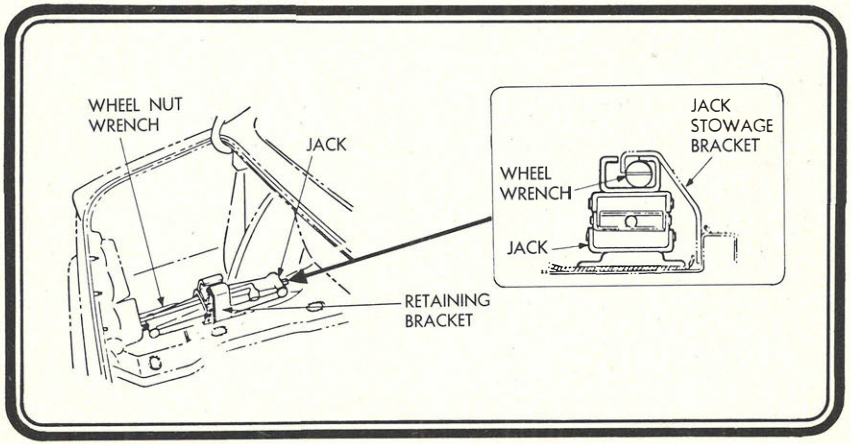
Use the jack handle to lower the jack until it is clear of its bracket and able to be removed. (The wheel nut wrench is stored in the jack head.)

To replace:

Lower the jack completely and place the wheel nut wrench in the jack head. Slide the jack and wrench into the bracket mounted on the vehicle boot floor and raise the jack with the handle until the complete assembly is held firmly in the centre by the retaining bracket.

Put the wheel and the jack handle back, tightening the restraining strap to hold both spare wheel and jack handle firmly.





Removing the Wheel Trim

Wheel covers

To remove:

Push the blade end of the wheel nut wrench between the wheel cover and the wheel and force it in about halfway.

Moving round the wheel, lightly pry the cover off at several points by twisting the wrench away from the tyre.

To replace:

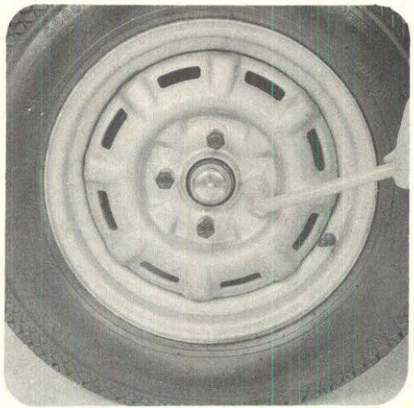
Press the cover into position against the wheel and knock it on with your hand. You may need to pad your hand for this.

Wheel Nut Covers can be prised off with the end of the wrench, and replaced by pushing them on with your hand.

Wheel Centre Cover is removed by removing the wheel nut covers and loosening the wheel nuts. Be sure to replace the wheel nuts tightly.

To replace the wheel centre cover position it over the wheel nuts and push it in until it snaps into place.

Replace the wheel nut covers.

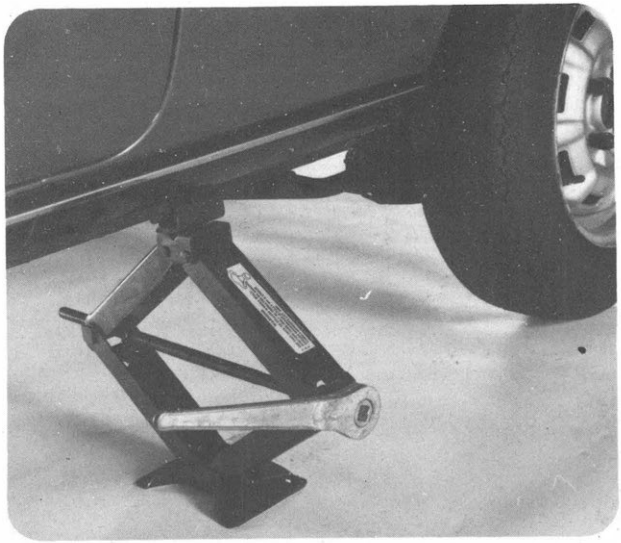


Wheel Changing

Put on the parking brake and put the car in Reverse (manuals) or Park (automatics).

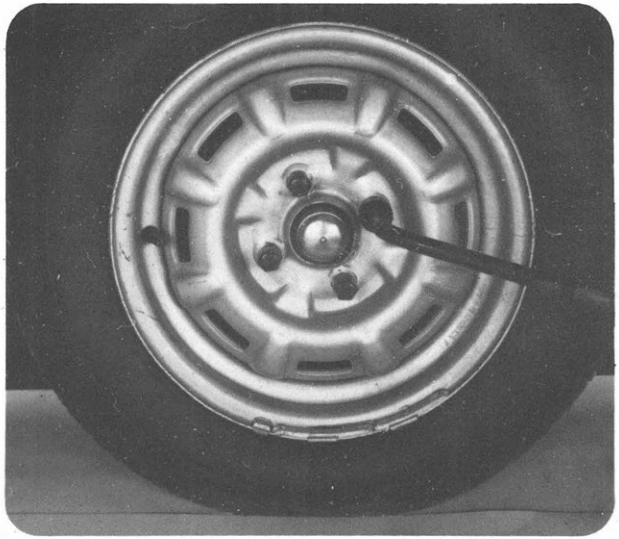
Remove the tools and spare wheel.

Remove the wheel trim and loosen the wheel nuts slightly. Don't remove them. Put the jack under the car as shown and work the handle back and forth to raise the car off the ground.



Remove the wheel nuts and change the wheel.

Tighten the wheel nuts with your fingers then with the wrench in the order shown. Lower the car and tighten the wheel nuts again with the wrench. As soon as possible have the wheel nuts checked for correct tightness.



Wheel Changing:

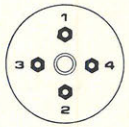
(Continued)

Cautions:

1. Carefully follow jacking instructions in order to reduce the possibility of serious personal injury.
2. The jack is designed for use ONLY when changing wheels.
3. Never get beneath the vehicle when supported by the jack only.
4. Do not start or run the engine while the vehicle is on the jack only.
5. While the vehicle is on the jack excessive passenger movement or releasing of the parking brake could cause the vehicle to move off its jacked position.

   Therefore wherever practicable it is best to disembark the passengers during the jacking operation.

Wheel Nut Tightening Sequence



CAUTION: As soon as practicable, after a wheel change, the wheel nut torques should be checked at a GMH Dealership, or by a competent person, to ensure correct tightness. (Refer page 00 for wheel nut torque specifications.)

Overheating

If this happens, stop by the roadside and let the engine idle for about two minutes. Then turn it off and open the bonnet.

While the engine is cooling, check your fan belt for slipping or breakage and check for damage to the radiator hoses. Take care as the hoses will be hot.

When the engine is cool, check the coolant level in the radiator as follows:—

Slowly turn the radiator cap to the left — don't press down on it. You will probably hear a hissing noise now as pressure is released. When this stops, continue to turn the cap, pressing down this time, until it can be removed.

Check the coolant level and add water if necessary. Add water with the engine idling and only when the engine is quite cool.

If overheating occurs again, get a mechanic to the car as quickly as possible.

CAUTION: DO NOT remove the radiator cap while the engine is still hot because the cooling system will blow out scalding fluid and steam under pressure which is likely to cause serious personal injury and loss of coolant.

Caravan or Trailer Towing

Your Gemini is designed primarily as a passenger vehicle so handling, durability and economy may be affected by towing a caravan or trailer.

Before you even think about doing this, check that the correct equipment is fitted to your car. Your GMH Dealer will help you.

Never exceed the loadings given in the table on page 39.

Running-in Period

It is best to drive your new Gemini for 1500 kilometres before towing a load. If you must tow before this, keep your speed down to 80 km/h.

The same applies if you have a new or reconditioned engine, transmission or rear axle.

Tongue Load

Your car-caravan combination will handle best if the load at the attachment coupling is about 10% of the caravan weight up to a maximum of 68 kg with a standard tow bar.

If you don't have an equalising load levelling hitch fitted then the load in the rear compartment should be reduced an amount equal to the load on the coupling (i.e. 10% of caravan weight).

If an equalising load levelling hitch is fitted you don't need to reduce the load.

Tyres

When towing, your tyres should be inflated to the maximum recommended pressure.

Electrical connection

A special wiring harness is available from your GMH dealer or accessories stockist. This is the only system recommended by GMH and use of any other may affect your warranty.

DANGER: If you remove your tow bar be sure to have any mounting holes properly sealed. Dangerous exhaust fumes can enter through these holes.

Safe Towing

- Your car will handle differently with a load behind. It's a good idea to make a couple of short distance trips with the caravan before you set off on the big one.
- Have your engine tuned before you leave.
- You should have an extended-arm mirror on **both** sides of the car.
- Headlights should be re-aimed after the loaded caravan has been hitched up
- Use a lower gear, rather than your brakes, when going down steep hills.
- If your caravan runs off the road behind you — and this is fairly common — allow the left wheels of the car to run off as well. Then wait for an opportunity to steer back on to the road. A sudden attempt to steer back will make you swerve dangerously.

Loading Your Gemini

Overloading is a safety hazard and could also shorten the life of your car or its parts.

Your GMH Dealer can advise you about maximum loading limits for your particular car.

TOW BAR LOADS

Before towing a trailer or caravan, it is necessary to check that the correct equipment is fitted to the vehicle to cover both the legal and manufacturer's requirements. The matter should be discussed with your Local GMH Dealer.

VEHICLE WEIGHT CHART (ESTIMATED)

Model	Kerb Weight kg	Maximum Rear Axle Loading kg	Maximum Loaded Vehicle Weight kg
Gemini Sedan	924	778	1352
Gemini "SL" Sedan	932	789	1369
Gemini "SLX" Sedan	960	773	1371

PERMISSIBLE OPERATING LOADS

APPLICATION		
"A". No brakes fitted to trailer.		
"B". Fitted with independently operated trailer brakes.		
ALL MODELS		
	— A —	— B —
Maximum Trailer Weight (Tare Weight plus all load)	340 kg	680 kg
Nominal Static Weight to be imposed on the Vehicle Tow-Bar Tongue by the Trailer (10% of the Trailer Weight)	†34 kg	†68 kg

† This weight must be included as part of the load carrying capacity of the vehicle.

Freeing a Bogged Car

Manual

With the engine running engage second then reverse gear repeatedly to put the vehicle into a "rocking" to and fro motion. Do not race the engine as this may cause excessive wheel spin and "dig" you further in as well as place undue strain on mechanical components.

Automatic

Move the gear selector from D to R repeatedly to put the vehicle into a to and fro rocking motion. Obey the above noted precautions regarding racing the engine.

Towing a Disabled Vehicle

It is always preferable to have a car towed by a tow truck. If this is not possible heed the following cautions.

Never tow a car on four wheels with the ignition switch in LOCK or ACC.

Never tow a car at speeds over 80 km/h.

If you have power assisted brakes, don't tow unless you use a solid connection between the cars or unless the vehicle being towed has its engine running.

Don't attach lifting hooks or chains to bumper bars or bumper brackets, or to any damaged part of the car.

Never allow passengers in the towed car.

Cars with damaged transmissions must not be towed unless the propeller shaft has been removed.

Automatic cars must not be towed for more than 55 km or at over 55 km/h unless the propeller shaft is removed.

In Case of Emergency

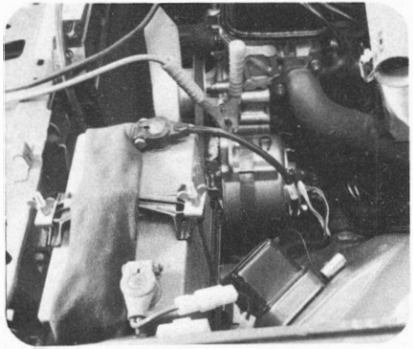
PUSH STARTING — Manual Cars

Put the vehicle in Neutral and turn the ignition switch to ON. Release the hand brake and have the vehicle pushed. When the vehicle reaches a speed of about 15 km/h, press in the clutch, select top gear and slowly let the clutch pedal come back up. When the car starts, depress the clutch and shift back to neutral, pull over and let the engine idle over for a while.

Jump Starting

This can be a dangerous procedure. If, for some reason, you can't do it **exactly** as recommended here — leave the job to a mechanic.

THE BOOSTER BATTERY must be the same voltage as yours (12 volts) and be negatively grounded if it is fitted to another vehicle. Read the other car's owner manual to check.



PUT BOTH CARS in either PARK (Automatic) or NEUTRAL (Manual) and turn off all lights.

REMOVE VENT CAPS OR COVERS from both batteries and lay a cloth over the open vent wells.

ATTACH one end of one jumper lead to the positive terminal of the car battery and the other end on the positive terminal of the booster battery. The positive terminals will be marked either by a red colour, a +, or P. ATTACH one end of the other jumper lead to the negative terminal of the booster battery (black colour, —, or N), and the other end to the alternator mounting bracket on your car.
Don't attach it to the **negative terminal** of the **dead battery**.

START THE ENGINE of the boosting car. Let run for a few minutes, then start your engine.

Reverse this procedure exactly to remove the jumper leads.

Careful of the cloth — it may have battery acid on it.

Battery Caution

Never expose a battery to open flame or electric sparks.

Don't allow battery acid to contact eyes, skin, fabric or painted surfaces. If you do get it on yourself, wash immediately with water and ring your doctor.

Wear eye protection when working on or near a battery.

Remove any metal jewellery before working on a battery.

Keep batteries and battery acid out of reach of children.

Section 4:

Emission Control Systems

IMPORTANT: This is an explanation of the operation of the emission control systems fitted to your new vehicle and should remain with the vehicle at the time of resale.

Introduction

There are three areas from which pollutants are emitted:

(a) Exhaust System
(b) Crankcase
(c) Fuel System.

A number of controls have been installed by General Motors-Holden's Limited to control the amount of pollutants emitted from your new vehicle.

The following has been produced to assist you in understanding their function by briefly explaining the operation of the various components involved.

Sources of Emissions

During the combustion process in an automotive engine, some of the fuel (hydrocarbons) fails to burn and is discharged into the engine crankcase or exhaust system. Additionally hydrocarbons are emitted into the atmosphere through evaporation of petrol vapors from the fuel tank and carburettor. Of the total hydrocarbons coming from uncontrolled automobiles, about 25% are emitted from the crankcase, 20% from the fuel system and 55% from the engine exhaust.

In addition to hydrocarbons, carbon monoxide and oxides of nitrogen are also formed during the combustion process. These are also discharged into the exhaust system.

What General Motors Has Done

Since research on the control of vehicle emissions first began General Motors world-wide resources have developed a number of control systems which are highly effective in reducing undesirable emissions. These systems are discussed in this publication.

Exhaust Emissions

The exhaust of a petrol automobile engine contains three significant air pollutants; carbon monoxide, unburned hydrocarbons, and oxides of nitrogen. It also contains small amounts of solid matter — called particulates — made up largely of lead compounds from the tetraethyl lead used to increase the octane rating of petrol.

Control of hydrocarbon emissions is important since, when subjected to sunlight under certain conditions, they may react with other gases to form photochemical smog. Carbon monoxide does not enter into the complex of photochemical smog reaction, but it is itself a pollutant and, thus, has been controlled to prevent high atmospheric concentrations.

Exhaust Emission Control Systems

Controlled Combustion System (CCS) Components

CARBURETTOR

The carburettor has been calibrated to give a lean mixture of a good quality, particularly at idle or during slow speed operation.

AUTOMATIC CHOKE

An electrically heated metal strip coil is used to open the choke. As the metal strip heats up the choke progressively comes out of operation.

DISTRIBUTOR

The advance curve of the ignition distributor contributes to meeting the emission limits.

IDLE STOP SOLENOID

An idle stop solenoid, which shuts off the idle fuel mixture when the ignition switch is turned off, has been introduced to reduce the possibility of engine run-on.

COOLING SYSTEM THERMOSTAT

The thermostat opening temperature has been revised to meet the requirements of the system during engine warm-up.

Coasting Richer System (CR)

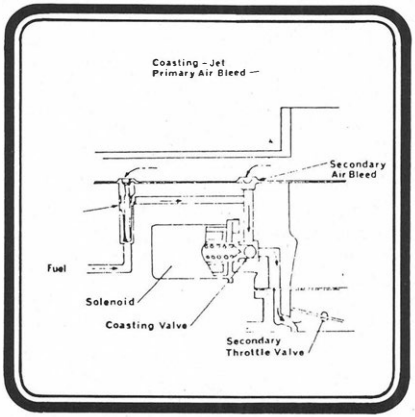
The Coasting Richer System fitted to Gemini manual transmission vehicles, is an independently operated auxiliary fuel system actuated by a solenoid on the carburettor. When energized, the solenoid retracts a plunger that allows an air/fuel mixture to enter under the secondary throttle valve. This mixture brings the air/fuel ratio back into balance for efficient combustion while the vehicle is operating under closed throttle conditions in third or fourth gear.

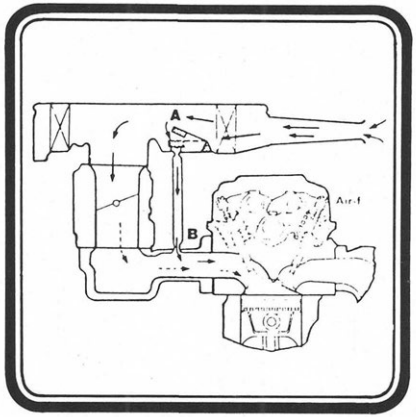
Hot Idle Compensator System (HIC)

Located in the air cleaner the Hot Idle Compensator valve is operated by a bi-metallic arm. (A) As the temperature in the air cleaner reaches approximately 47°C the valve opens and allows filtered air to enter through a restricted orifice into the intake manifold (B) via a connecting hose. This increases idle speed and air flow, leaning off the air fuel mixture and thus reducing HC and CO content. It also gives a smoother idle as intake air temperature increases.

Vacuum Advance Control (VAC) System

This system is designed to control the vacuum signal available to the vacuum advance mechanism of the distributor. A "ported" vacuum spark advance system is used to optimise emission control as well as vehicle performance. When the throttle is in the idle position, the "port" which is above the throttle valve, has no vacuum present. As the throttle opens the port is uncovered providing vacuum advance for normal economy operation.

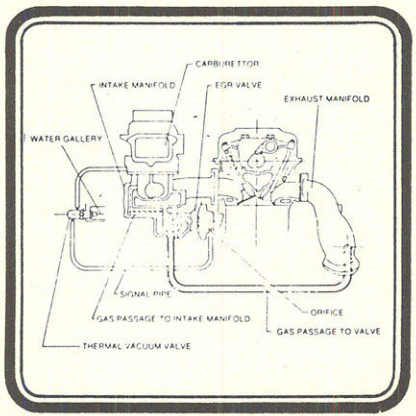




Exhaust Gas Recirculation (EGR) System

This system introduces controlled quantities of exhaust gas into the inlet manifold resulting in lower peak combustion temperatures in the combustion process which, in turn, reduces the formation of nitrogen oxides.

A thermal vacuum valve opens the vacuum line to the exhaust gas recirculation valve only after the engine coolant has reached a predetermined temperature. At this stage the valve is subjected to a ported vacuum signal from the carburettor.

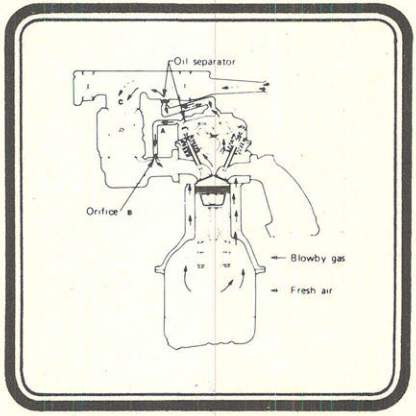


Crankcase Emission Control System

Positive Crankcase Ventilation (PCV) System

The purpose of the system is to draw the blow-by gases out of the crankcase, into the intake manifold system and thus recycle these gases through the combustion process in the cylinders.

At idle and during normal driving conditions gases are drawn out of the crankcase via a hose (A) through the restricted orifice (B) into the intake manifold. During acceleration or constant high speed operation some of the blow-by gas is drawn into the carburettor via the air cleaner (C).



Crankcase Emissions

Emission of hydrocarbons from the engine crankcase is another source of automotive air pollution. This emission occurs in the following manner.

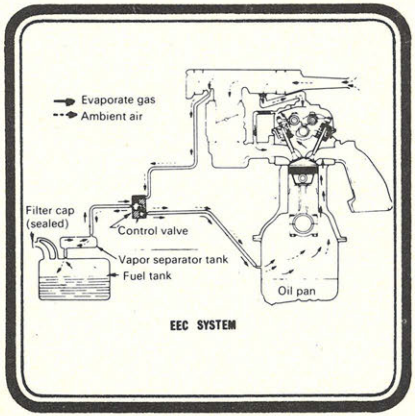
During the combustion process in all petrol engines, some gases escape past the piston rings and into the crankcase. These gases contain unburned fuel. This "blow-by" occurs because of the very high pressures in the combustion chambers.

Evaporative Emissions

Another source of emissions from automobiles is evaporation of petrol. This occurs, not only when the fuel tank is being filled, but at other times, even when the vehicle is not in operation. Special systems to control evaporation have recently been developed, and are now installed on Gemini.

Evaporative Emission Control (EEC) System

The fuel vapours are directed from the liquid/vapour separator tank to the engine oil pan and purged via the PCV system. In order to prevent vapours flowing to the air cleaner, the relief valve on the air cleaner side of the Control Valve remains closed while the check valve to the crankcase is open. The relief valve also compensates pressure/vacuum in the fuel tank.



EEC SYSTEM

Maintenance

The required owner emission control systems maintenance operations presented in this Owners Handbook should be performed by an authorized GMH dealer or any other qualified service outlet which regularly performs such services.

Vehicle Operations

The maintenance instructions contained in the Owner Handbook, are based on the assumption that your vehicle will be used as designed and is operated in accordance with the instruction provided in the handbook.

Service Manuals

Service manuals, providing greater detail on emission systems, are available for purchase by owners who desire to perform their own vehicle maintenance.

These are available from a GMH dealer or from:

STAN H. EARLE,
46 ISABELLA STREET,
MOORABBIN 3189
VICTORIA

Service Replacement Parts

The emission control systems of your new vehicle were designed, built and tested using GM parts and the vehicle is certified as being in conformity with Australian Design Rules covering emissions. Accordingly, it is recommended that any replacement parts used for required maintenance services or for the repair of emission control systems be new GM parts. Use of replacement parts which are not of equivalent quality may impair the effectiveness of such systems, and may adversely affect your vehicle Warranty.

Vehicle Emission Control Information Label

This label is located on the underside of the engine hood and provides all relative specifications required to correctly tune the engine of your Gemini.

VEHICLE EMISSION CONTROL INFORMATION

GM

MAKE IDLE SPEED AND TIMING ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE OPEN, AIR CONDITIONING OFF, AIR CLEANER INSTALLED AND DISTRIBUTOR VACUUM LINE AND IDLE COMPENSATOR VACUUM LINE DISCONNECTED AND PLUGGED, TRANSMISSION IN NEUTRAL. BOTH MANUAL AND AUTOMATIC RECONNECT BOTH VACUUM LINES WHEN ADJUSTMENTS ARE COMPLETED.

SET PARKING BRAKE AND BLOCK DRIVE WHEELS

1. TURN THE IDLE MIXTURE ADJUST SCREW ALL THE WAY IN AND BACK OUT 4 TURNS.
2. ADJUST THROTTLE ADJUST SCREW TO SPECIFIED IDLE SPEED.
3. ADJUST SETTING OF IDLE MIXTURE. ADJUST SCREW TO ACHIEVE THE MAXIMUM ENGINE SPEED.
4. RESET THROTTLE ADJUST SCREW TO SPECIFIED IDLE SPEED.
5. TURN IDLE MIXTURE ADJUST SCREW CLOCKWISE (LEAN) UNTIL ENGINE SPEED IS DOWN TO 650 RPM FOR MANUAL AND 850 RPM FOR AUTOMATIC VEHICLES.
6. TURN IDLE MIXTURE ADJUST SCREW 1/2 TURN COUNTER CLOCKWISE (RICH) FROM ITEM 5 POSITION.
7. RESET THROTTLE ADJUST SCREW TO SPECIFIED IDLE SPEED.

IGNITION TIMING SETTING PROCEDURE

1. SET SPECIFIED IDLE SPEED.
2. CONNECT TIMING LIGHT LEAD TO EITHER NUMBER 1 OR 4 CYLINDER.
3. IGNITION TIMING CAN BE ADJUSTED BY LOOSENING DISTRIBUTOR CLAMPING BOLT AND TURNING DISTRIBUTOR WITH TIMING LIGHT AIMED TOWARD TIMING MARK. ALIGN MARK ON CRANKSHAFT PULLEY TO TIMING MARK.

CAUTION: REMOVAL OF ADJUSTMENT CAPS AND ALTERATION TO OTHER THAN SPECIFIED IDLE MIXTURE SETTING MAY VIOLATE STATE LAWS. SEE SERVICE MANUAL FOR FURTHER INFORMATION.

ENGINE	IGNITION		PLUG GAP	TRANS	IDLE SPEED (RPM)
	DWELL	TIMING			
L4 1600	52°	6°BTDC	0.76+0.0 mm −0.1 mm	AUTO MAN	900 700

92008938 FF

Section 5:

Appearance — Care

Paintwork

The paint on your Gemini is finished in acrylic lacquer and will stay bright and new-looking provided you wash it regularly, using approved products. Weekly washing is recommended if the car is being used constantly or if it is not parked under cover.

Before you wash the paintwork, thoroughly wash in and around the front and rear windows and check that door drain holes, tailgate drain holes and rocker sill vents are clean. Hose off any heavy dirt on the glass, but leave final cleaning of the glass until last.

Washing tips

Use either cold or warm water — preferably running.

Use clean chamois cloths, sponges or rags (old, clean linen is better than new material for glass).

Don't wash your car in bright sunlight — it will streak.

Grease and oil can be removed with a little kerosene or white spirits. Flush with water afterwards.

If petrol is spilled during refilling, flush with water immediately.

Be sure that your cleaner, polish or wax is suitable for acrylic finishes. AC Delco Wash & Wax from your GMH Dealer is highly recommended.

Insect spots can be removed with a mixture of 220 grams of baking soda in 2 litres of water. Flush clean afterwards. New tyre look can be restored with AC Delco Tyre Black from your GMH Dealer.

Tarnished chrome responds well to AC Delco Polishing Liquid.

Interior Cleaning

A vacuum cleaner, brush and soft cloth should be all you need to keep the interior of your car clean.

But sticky-fingered children and muddy dogs may cause the need for more specialised "spot cleaning".

Interior cleaning tips

Spots and stains should be removed as soon as possible. On vinyl, use a soft sudsy cloth or soft bristle brush and rub over with a clean, damp cloth.

If this doesn't work, try AC Delco Upholstery Cleaner & Deodorant.

On cloth trim, sponge the stain lightly with warm water and detergent with a little ammonia added. Or use AC Delco Upholstery Cleaner sparingly.

Very soiled carpets respond well to AC Delco Car Care Upholstery Cleaner used after vacuuming.

Seat belts may be cleaned with warm water and mild soap — never bleach.

Ash trays

Front seat ash trays are removed by sliding the tray out and pushing down the tab and pulling the tray free.

Rear seat ashtrays are removed by opening the lid, pressing down the tab and pulling out.

Section 6:
Owner Relations

Owner Relations

Section 7:
Authorised GMH Dealers

GMH Dealers

Section 8:
Specifications

Specifications

Section 9:
Service and Maintenance

Service & Maintenance

Section 10:
Owner's Responsibility

Owner's Responsibility

Owner Relations Managers

QUEENSLAND
General Motors-Holden's Sales Pty. Ltd.,
Box 728, G.P.O.,
BRISBANE, QLD. 4001.

NEW SOUTH WALES AND AUSTRALIAN CAPITAL TERRITORY
General Motors-Holden's Sales Pty. Ltd.,
Box 4239, G.P.O.,
SYDNEY, N.S.W. 2001.

VICTORIA AND TASMANIA
General Motors-Holden's Sales Pty. Ltd.,
Box 1273 L, G.P.O.,
MELBOURNE, VIC. 3001.

SOUTH AUSTRALIA AND NORTHERN TERRITORY
General Motors-Holden's Sales Pty. Ltd.,
Box 96, P.O.,
ELIZABETH, S.A. 5112.

WESTERN AUSTRALIA
General Motors-Holden's Sales Pty. Ltd.,
P.O. Box 426,
WEST PERTH, W.A. 6005.

Section 6:

Owner Relations

We want you to be happy with your new Gemini and with the people you deal with while you have the car.

Normally, any problems which may arise with the sales transaction, operation or servicing of your car will be handled by your Dealer's Sales and Service department.

We realise however that, with the best intentions, misunderstandings do occur sometimes.

If you have a problem that has not been settled to your satisfaction here's what to do:

Step 1:

Discuss the problem with one of the Dealer's management people. If you feel you haven't got satisfaction from the Sales Manager or Service Manager — go to the General Manager or the Dealer himself.

Step 2:

If it seems that no-one at the Dealership can help fully, write to the Zone Owner Relations Manager in your State outlining your problem and including your name, address and telephone number; the vehicle model number and vehicle identification number; the vehicle delivery date and odometer reading and the dealer's name and address. This information will be on your Warranty Certificate.

Step 3:

By now you should have satisfaction. If not, you can write to the National Owner Relations Manager, GMH Sales Pty Ltd, P.O. Box 5431 CC Melbourne 3001.

Always try to sort things out at the Dealership. Owner Relations managers will have to refer the problem back to the dealer.

New Vehicle Warranty

GENERAL MOTORS-HOLDEN'S SALES PTY. LTD. HEREBY WARRANTS THAT IT WILL MAKE GOOD, WITHOUT CHARGE, ANY DEFECT WHICH APPEARS IN THE VEHICLE IDENTIFIED IN THE VEHICLE IDENTIFICATION CERTIFICATE FOUND ON THE INSIDE OF THE FRONT COVER

Provided

1. the defect has been notified to an authorised GMH Dealer or Service Dealer:
   (a) before the vehicle has travelled a distance of 20,000 km, or:
   (b) within 12 months of the date of delivery of the vehicle to the first retail purchaser (or in the case of a Demonstrator vehicle within 12 months of the date when it was first placed into service by the Dealer)

   whichever comes first, and
2. the vehicle has been returned to an authorised GMH Dealer or Service Dealer

And

3. the Dealer has determined that the defect complained of *is* one of material or workmanship and *is not* caused by:
   (a) misuse or abuse of the vehicle such as by racing, rallying, overloading, etc. or by neglect
   (b) operation of the vehicle after it is known to be defective
   (c) accident or deliberate act
   (d) atmospheric fallout or flood, hail, salt, etc.
   (e) failure to carry out proper maintenance service
   (f) alteration or modification of the vehicle
   (g) the fitting of parts or accessories not marketed by GMH
   (h) any work carried out on the vehicle by someone other than an authorised GMH Dealer or Service Dealer,

BY THE DEALER (or as otherwise decided by GMH Sales) MAKING GOOD THE DEFECT BY REPAIR OR, AT THE OPTION OF GMH SALES, BY REPLACEMENT.

Excluded from this Warranty are

- defects in tyres or tubes (these being warranted by their manufacturers), and services such as engine tuning, brake adjustment, replacement of air and oil filters, etc. which are required as part of normal vehicle maintenance.

This Warranty is given to the person who is entitled to possession of the vehicle whether as owner, lessee or otherwise and is given in addition to all rights conferred by law on that person.

No GMH dealer or other person is authorised or permitted to give or make any statement assertion or undertaking in relation to the quality performance characteristics descriptions or fitness for any purpose of any GMH product or in connection with the supply of any GMH product, which is at variance with any written statement assertion or undertaking on any of these subjects given or made by General Motors-Holden's Limited or General Motors-Holden's Sales Pty. Ltd. in its published sales literature, and neither company accepts any liability for any such unauthorised action.

General Motors-Holden's Limited and General Motors-Holden's Sales Pty. Ltd. have franchised dealers in many parts of Australia for the sale of service parts and the provision of service to owners of GMH's products. Every endeavour is made to ensure that such dealers carry adequate stocks of service parts, and are equipped to provide satisfactory service, but neither General Motors-Holden's Ltd. nor General Motors-Holden's Sales Pty. Ltd. makes any promise that such parts or service facilities will be available, or available at any specific location or any particular time.

General Motors-Holden's Limited warrants in respect of GMH parts and accessories required as replacement parts, that it will make good by repair or at its option by replacement any defect occurring in any such GMH parts and accessories within 3 months from the date of acquisition or in the case of a GMH part or accessory which has been installed in a vehicle by a GMH Dealer or Service Dealer before such vehicle has travelled a distance of 6,500 kms from the date of installation, whichever first occurs.

RADIO WARRANTY
(complete details only if additional radio equipment is fitted)

Make of Vehicle .....

Registered No. of Vehicle.....

Date of Installation.....

Speedometer Reading.....

Model & serial number of:

Car Radio.....

Car Radio/Cassette Player .....

Cassette Player .....

Cartridge Player .....

Installed by

Address.....

.....

Owner's Name.....

Address.....

.....

Dealer's Name.....

Address.....

.....

Section 7:

Authorised GMH Dealers

Effective 2/10/79

NEW SOUTH WALES — Metropolitan Dealers

ARNCLIFFE
Suttons Motors (Arncliffe) Pty. Ltd.,
93 Princes Highway

ASHFIELD
Muirs Motors (Ashfield) Pty. Ltd.,
252 Parramatta Road

AUBURN
H. & G. M. Nyhuls Motors (Auburn) Pty. Ltd.,
235 Parramatta Road

BALGOWLAH
Ross Hannon Motors
164 Condamine Street

BANKSTOWN
Boyded Bankstown
236-242 South Terrace

BAULKHAM HILLS
Tony Packard Motors
Cnr. Victoria Avenue & Windsor Road

BLACKTOWN
Mitchell & Townsend,
125 Main Street

CABRAMATTA
Ron Hodgson (Cabramatta) Pty. Ltd.,
266 Hume Highway

CAMPBELLTOWN
Clintons Motors Pty. Ltd.,
3-17 Queen Street

CHATSWOOD
Sundell Holden
815-843 Pacific Highway

CHULLORA
Suttons Motors (Chullora) Pty. Ltd.,
Cnr. Hume Highway & Waterloo Road

CROW'S NEST
J. N. Caldwell (Holdings) Pty. Ltd.,
1 Alexander Street

DEE WHY
Norman G. Booth (Dee Why) Pty. Ltd.,
Cnr. May and Mooramba Roads

HOMEBUSH
Gilbert & Roach Pty. Ltd.,
187 Parramatta Road

HOMEBUSH
Suttons Motors (Homebush) Pty. Ltd.,
112 Parramatta Road

HURSTVILLE
H. & G. M. Nyhus Pty. Ltd.,
412 Forest Road

KINGSFORD
John Pelligrini Motors Pty. Ltd.,
263-271 Anzac Parade

LAKEMBA
R. B. Nash Pty. Ltd.,
1018 Canterbury Road

LIVERPOOL
A. C. McGrath & Company,
Cnr. Castlereagh St. & Hume Highway

LIVERPOOL
Pat Cullen's Garage,
324-360 Hume Highway

MIRANDA
W. H. Lober & Co. Pty. Ltd.,
1-3 Kiora Road

MOSMAN
Norman G. Booth Pty. Ltd.,
501 Military Road

NEWPORT BEACH
Sundell Motors Pittwater Pty. Ltd.,
Barrenjoey Road

PADSTOW
W. Bagnall Pty. Ltd.,
19 Davies Road

PARRAMATTA
Fair Deal Car Sales Pty. Ltd.,
65 Church Street

PARRAMATTA
Hillsdon's Pty. Ltd.,
87 Church Street

PENNANT HILLS
L. W. Vagg & Co. Pty. Ltd.,
351-355 Pennant Hills Road

RANDWICK
Boyded (Randwick),
265 Avoca Street

ROCKDALE
C. V. Holland Pty. Ltd.,
571 Princes Highway

ROSE BAY
Vern Potts,
505-509 Old South Head Road

RYDE
Muirs Motors (Ryde) Pty. Ltd.,
603-605 Victoria Road

ST. MARY'S
Lance Motors Pty. Ltd.,
412 Western Highway

WAITARA
John A. Gilbert (Northside) Pty. Ltd.,
90 Pacific Highway

WINDSOR
Hawkesbury Valley Motors,
122 George Street.

NEW SOUTH WALES —

Country Dealers & Service Dealers

- ADELONG
- ALBURY
- ARDLETHAN
- ARMIDALE
- BALLINA
- BARADINE
- BARELLAN
- BARHAM
- BARRABA
- BATHURST
- BEGA
- BELCONNEN
- BELLINGEN
- BELMONT
- BLAYNEY
- BOGGABRI
- BOMBALA
- BOURKE
- BOWRAL
- BREWARRINA
- BROKEN HILL
- BULAHDELAH
- CANOWINDRA
- CASINO
- CESSNOCK
- COBAR

- COFF'S HARBOUR
- COLLARENEBRI
- CONDOBOLIN
- COOLAMON
- COOMA
- COONABARABRAN
- COONAMBLE
- COOTAMUNDRA
- COROWA
- COWRA
- CROOKWELL
- CULCAIRN
- DENILIQUIN
- DORRIGO
- DUBBO
- DUNGOG
- FINLEY
- FORBES
- GILGANDRA
- GLEN INNES
- GLOUCESTER
- GOSFORD
- GOULBURN
- GRENFELL
- GRIFFITH
- GULARGAMBONE
- GUNDAGAI
- GUNNEDAH
- GUNNING
- GUYRA
- HARDEN
- HAY
- HOLBROOK
- INVERELL
- JERILDERIE
- JUNEE
- KANDOS
- KATOOMBA
- KEMPSEY
- KIAMA
- KURRI KURRI
- KYOGLE
- LAKE CARGELLIGO
- LEETON
- LISMORE
- LITHGOW
- MACKSVILLE
- MAITLAND
- MILTON
- MOLONG
- MOREE
- MORUYA
- MOSS VALE
- MUDGEE
- MULLUMBIMBY
- MUNGINDI
- MURWILLUMBAH
- MUSWELLBROOK
- NARRABRI
- NARRANDERA
- NARROMINE
- NEWCASTLE
- NOWRA
- NYNGAN
- ORANGE
- PARKES
- PEAK HILL
- PENRITH
- PICTON
- PORT MACQUARIE
- QUEANBEYAN
- QUIRINDI
- SCONE
- SINGLETON
- SPRINGWOOD
- TAMWORTH
- TAREE
- TEMORA
- TENTERFIELD
- TORONTO
- TOTTENHAM
- TRANGIE
- TULLAMORE
- TUMBARUMBA
- TUMUT
- TWEED HEADS
- WAGGA
- WALCHA
- WALLA WALLA
- WALGETT
- WARIALDA
- WARREN
- WAUCHOPE
- WELLINGTON
- WEST WYALONG
- WINGHAM
- WOLLONGONG
- WOODENBONG
- WYONG
- YASS
- YOUNG

VICTORIA—Metropolitan Dealers

BENTLEIGH
Noel Gould Bentleigh Pty. Ltd.,
280 Centre Road

BERWICK
Noel Gould Berwick Pty. Ltd.,
Princes Highway

BALWYN
Southern Motors (Box Hill) Pty. Ltd.,
126 Whitehorse Road

BRAYBROOK
Kevin Dennis Motors (Sunshine) Pty. Ltd.,
272 Ballarat Road

BUNDOORA
Watsons of Greensborough
413 Grimshaw Street

BURWOOD
Dustings Pty. Ltd.,
1200 Toorak Road

CAULFIELD
Booran Motors Pty. Ltd.,
1049 Glenhuntly Road

CHELSEA
Ron Morphy Motors
370 Nepean Highway

CHELTENHAM
Balmoral Motors Pty. Ltd.,
1190 Nepean Highway

DANDENONG
Bill Patterson-Cheney Dandenong Pty. Ltd.,
141 Lonsdale Street

DANDENONG
Preston Motors (Dandenong) Pty. Ltd.,
Princes Highway

DONCASTER
Lance Dixon World of Cars
601 Doncaster Road

ELSTERNWICK
Reg. Hunt Motors Pty. Ltd.,
77 Nepean Highway

ESSENDON
Preston Motors (Essendon) Pty. Ltd.,
207-211 Keilor Road

FAWKNER
M. S. & G. Mantello Pty. Ltd.,
1263 Sydney Road

FERNTREE GULLY
Neil Neilson Pty. Ltd.,
980 Burwood Road

FOOTSCRAY WEST
Alan Mance Motors Pty. Ltd.,
435 Barkly Street

FOOTSCRAY
Bill Patterson Cheney Ltd.,
130 Moreland Street

FRANKSTON
Bayside Motors Pty. Ltd.,
54 Playne Street

GLEN WAVERLEY
Geoff Brady Motors Pty. Ltd.,
Springvale

HASTINGS
Dustings of Hastings
762 Hastings Road

HEIDELBERG WEST
Northpoint Holden
66 Bell Street

LILYDALE
Peter Robinson Holden
Main Street

MORNINGTON
Peninsula Holden
Cnr Nepean Highway & Tyabb Road

OAKLEIGH
Garry & Warren Smith Pty. Ltd.,
1575 Dandenong Road

PRESTON
Graham Hunt Motors Pty. Ltd.,
518 High Street

RINGWOOD
Bill Patterson—Ringwood Holden
45-57 Maroondah Highway

SOUTH MELBOURNE
John Martin Motors Pty. Ltd.,
132 Sturt Street

WARRANDYTE
Getson Motors Pty. Ltd.,
Yarra Street

WEST MELBOURNE
Reg Hunt Motors Pty. Ltd.,
577 King Street

YARRAVILLE
W. H. & S. Massey Pty. Ltd.,
708 Geelong Road

VICTORIA — Country Dealers & Service Dealers

- ALEXANDRA
- ARARAT
- BACCHUS MARSH
- BAIRNSDALE
- BALLARAT
- BENALLA
- BENDIGO
- BIRCHIP
- BOORT
- CAMPERDOWN
- CASTERTON
- CASTLEMAINE
- CHARLTON
- COBRAM
- COHUNA
- COLAC
- COLERAINE
- CORRYONG
- DAYLESFORD
- DERRINALLUM
- DIMBOOLA
- DONALD
- DROUIN
- ECHUCA
- EUROA
- FOSTER
- GEELONG
- HAMILTON
- HEALESVILLE
- HEATHCOTE
- HOPETOUN
- HOPPERS CROSSING
- HORSHAM
- JEPARIT
- KANIVA
- KERANG
- KOOWEERUP
- KORUMBURRA
- KYABRAM
- KYNETON
- LANG LANG
- LEONGATHA
- MAFFRA
- MANSFIELD
- MARYBOROUGH
- MILDURA
- MINYIP
- MOE
- MORTLAKE
- MORWELL
- MURRYVILLE
- MYRTLEFORD
- NAGAMBIE
- NHILL
- NULLAWIL
- NUMURKAH
- NYAH
- ORBOST
- OUYEN
- PORTLAND
- QUAMBATOOK
- RAINBOW
- ROCHESTER
- RUTHERGLEN
- SALE
- SEA LAKE
- SEYMOUR
- SHEPPARTON
- ST. ARNAUD
- STAWELL
- SWAN HILL
- TALLANGATTA
- TIMBOON
- TRARALGON
- UNDERBOOL
- WANGARATTA
- WARBURTON
- WARRACKNABEAL
- WARRNAMBOOL
- WODONGA
- WONTHAGGI
- WYCHEPROOF
- YARRAM
- YARRAWONGA

AUSTRALIAN CAPITAL TERRITORY

- CANBERRA (Suburban Locations)
- BARTON
- BRADDON
- FYSHWICK
- PHILLIP

QUEENSLAND — Metropolitan Dealers

ALBION
Bill Harrison Car Sales,
Cnr Frodsham Street & Crosby Road

ASPLEY
Zupp (Aspley) Pty. Ltd.,
1442 Gympie Road

BEENLEIGH
Midways (Beenleigh) Pty. Ltd.,
George Street

MT. GRAVATT
Zupps Motors Pty. Ltd.,
1310 Logan Road

NEWSTEAD
Eagers Retail Pty. Ltd.,
95 Breakfast Creek Road

WINDSOR
Leach Motors (Northside) Pty. Ltd.,
Newmarket Road

WOOLOONGABBA,
Eagers (Southside), Pty. Ltd.,
Cnr. Logan Road and
Trafalgar Street

WYNNUM
G. & B. Motors,
200 Tingal Road

NUNDAH
Eagers (Northside),
Cnr. New Sandgate Road and
Wood Street

MOOROOKA
John Sivyer Pty. Ltd.,
1606 Ipswich Road

OXLEY
Wayne Hill Holden,
2193 Ipswich Road

REDCLIFFE
John Lingham Motors,
425 Elizabeth Avenue

STONES CORNER
Leach Motors (Southside) Pty. Ltd.,
456 Logan Road

QUEENSLAND — Country Dealers & Service Dealers

- ALLORA
- ATHERTON
- AUGATHELLA
- AYR
- BEAUDESERT
- BEERWAH
- BILOELA
- BOWEN
- BUNDABERG
- CABOOLTURE
- CAIRNS
- CALOUNDRA
- CHARLEVILLE
- CHARTERS TOWERS
- CHINCHILLA
- CLERMONT
- CLEVELAND
- CLONCURRY
- COOLANGATTA
- CUNNAMULLA
- DALBY
- DIRRANBANDI
- EMERALD
- GATTON
- GAYNDAH
- GLADSTONE
- GOONDIWINDI
- GYMPIE
- HUGHENDEN
- INGHAM
- INNISFAIL
- IPSWICH
- JANDOWAE
- JULIA CREEK
- KILCOY
- KINGAROY
- LAIDLEY
- LONGREACH
- MACKAY
- MAREEBA
- MARYBOROUGH
- MILES
- MITCHELL
- MONTO
- MOURA
- MT. ISA
- MURGON
- NAMBOUR
- NANANGO
- NOOSA HEADS
- PETRIE
- PROSERPINE
- QUILPIE
- ROCKHAMPTON
- ROMA
- SOUTHPORT
- SPRINGSURE
- STANTHORPE
- ST. GEORGE
- TARA
- TARINGA
- TEXAS
- TOOWOOMBA
- TOWNSVILLE
- TULLY
- WARWICK
- WINTON
- YULEBA

SOUTH AUSTRALIA — Metropolitan Dealers

ADELAIDE
City Holden,
215 Grenfell Street

ADELAIDE
Freeman Motors Ltd.,
72 Franklin Street

ELIZABETH
Peter Page Pty. Ltd.,
Elizabeth Way

GAWLER
Fairdeal Motors Pty. Ltd.,
48 Murray Street

GLENELG
John H. Ellers Pty. Ltd.,
282 Brighton Road

MALVERN
Claridge Motors Pty. Ltd.,
361-367 Unley Road

MODBURY
North East Plaza Pty. Ltd.,
817-839 North East Road

MORPHETT VALE
Coleton Motors Pty. Ltd.,
345 Main Road South

PORT ADELAIDE
Smith Motor Co. Pty. Ltd.,
171 Commercial Road

SOUTH AUSTRALIA — Country Dealers & Service Dealers

- ARDROSSAN
- BALAKLAVA
- BERRI
- BORDERTOWN
- BRINKWORTH
- BURRA
- CLARE
- CLEVE
- CRYSTAL BROOK
- CUMMINS
- GLADSTONE
- JAMESTOWN
- KADINA
- KEITH
- KIMBA
- KINGSCOTE
- KINGSTON
- LAMEROO
- LOXTON
- McLAREN VALE
- MAITLAND
- MALLALA
- MANNUM
- MANOORA
- MENINGIE
- MILLICENT
- MT. BARKER
- MT. GAMBIER
- MURRAY BRIDGE
- NARACOORTE
- ORRORO0
- PETERBOROUGH
- PORT AUGUSTA
- PORT LINCOLN
- PORT PIRIE
- QUORN
- RENMARK
- SEDAN
- STRATHALBYN
- STREAKY BAY
- TANUNDA
- VICTOR HARBOR
- WAIKERIE
- WHYALLA
- WUDINNA
- YANKALILLA
- YORKTOWN

WESTERN AUSTRALIA — Metropolitan Dealers

BELMONT
Major Motors Pty. Ltd.,
225 Great Eastern Highway

CANNINGTON
Brian Gardner Motors Pty. Ltd.,
1308 Albany Highway

FREMANTLE
Shack & KERR Motors Pty. Ltd.,
59 Queen Victoria Street

GOSNELLS
Lance Gibbons Motors Pty. Ltd.,
2325 Albany Highway

MELVILLE
Melville Motors Pty. Ltd.,
532-536 Canning Highway

MIDLAND
Webster Motors Pty. Ltd.,
37 Great Northern Highway

MORLEY
Metro Motors Pty. Ltd.,
212 Walter Road

NAVAL BASE
Shack Motors Cockburn Pty. Ltd.,
Rockingham Road

OSBORNE PARK
North City Pty. Ltd.,
Cnr. Scarborough Beach Rd.
& Harbourne Street

PERTH
City Motors Pty. Ltd.,
505 Newcastle Street

PERTH
Sydney Atkinson Motors Ltd.,
20 Terrace Drive

VICTORIA PARK
Young's W.A. (1975) Pty. Ltd.,
529 Albany Highway

WANNEROO
Phoenix Motors Pty. Ltd.,
316 Berriman Drive

WESTERN AUSTRALIA— Country Dealers & Service Dealers

- ALBANY
- BEVERLEY
- BODDINGTON
- BOYUP BROOK
- BROOKTON
- BROOME
- BRUCE ROCK
- BUNBURY
- BUSSELTON
- CARNAMAH
- CARNARVON
- COLLIE
- CORRIGIN
- CRANBROOK
- DALWALLINU
- DERBY
- ESPERANCE
- GERALDTON
- GNOWANGERUP
- GOOMALLING
- HARVEY
- KALGOORLIE
- KAMBALDA
- KARRATHA
- KATANNING
- KELLERBERRIN
- KULIN
- KUNUNURRA
- MANDURAH
- MANJIMUP
- MERREDIN
- MOORA
- MORAWA
- MT. BARKER
- MULLEWA
- NAREMBEEN
- NARROGIN
- NORTHAM
- PINGELLY
- PORT HEDLAND
- QUAIRADING
- WAGIN
- WONGAN HILLS
- WYALKATCHEM

TASMANIA — Metropolitan & Country Dealers & Service Dealers

HOBART
Motors Pty. Ltd.,
179 Macquarie Street

BURNIE
Motors Pty. Ltd.,
54 Marine Terrace

DEVONPORT
Motors Pty. Ltd.,
24 Best Street

HUONVILLE
Motors Pty. Ltd.,
Main Street

KING ISLAND
King Island Motors,
Currie

LAUNCESTON
Motors Pty. Ltd.,
165 Brisbane Street

LAUNCESTON
Nettlefold Car & Truck Pty. Ltd.,
71 Bathurst Street

SMITHTON
Smithton Motors Pty. Ltd.,
16 Nelson Street

ULVERSTONE
Motors Pty. Ltd.,
99 Reibey Street

NORTHERN TERRITORY — Dealers

ALICE SPRINGS
Kittle Bros. (Alice Springs) Pty. Ltd.,
Wills Terrace

DARWIN
Suttons Motors (Darwin) Pty. Ltd.,
Cnr. Mitchell and Knuckey Streets

KATHERINE
Katherine Motors Pty. Ltd.,
Katherine Street

Section 8:

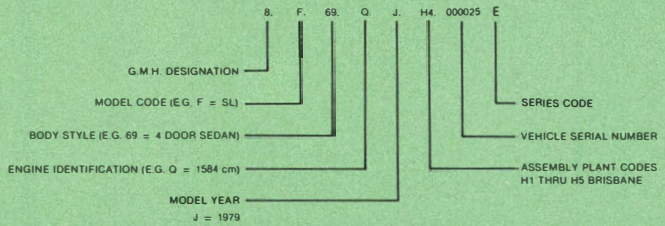
Specifications

Serial Numbers

V.I.N. Plate (Vehicle Identification Number)

Attached to the top right hand side (driver's side) of the radiator support panel.

The table below gives a breakdown of the V.I.N. and the meaning of each section.


8. F. 69. Q. J. H4. 000025 E
G.M.H. DESIGNATION
MODEL CODE (E.G. F = SL)
BODY STYLE (E.G. 69 = 4 DOOR SEDAN)
ENGINE IDENTIFICATION (E.G. Q = 1584 cm)
MODEL YEAR
J = 1979
SERIES CODE
VEHICLE SERIAL NUMBER
ASSEMBLY PLANT CODES
H1 THRU H5 BRISBANE

Vehicle Serial Number (Chassis Number)

Stamped on the front of the right hand side (driver's side) of the radiator support.

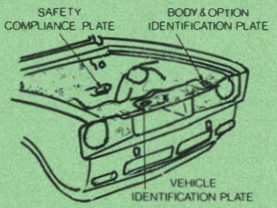
Body & Option Identification Plate

Attached to the top left hand side (passenger's side) of the radiator support panel under the engine hood. Plate shows Model Number; Body Number; Trim; Paint; Top (i.e. Upper Colour of Two-Tone Colour Unit); Engine Transmission and Rear Axle Options.

Engine Number and Suffix Code

The engine number is stamped on the front right hand side (driver's side) upper surface of the cylinder block.

The suffix code assigned to the Engine is "Q", i.e. "Q" signifies — 8.7 to 1 Compression Ratio.



Safety Compliance Plate

Attached to the lower left hand side (passenger's side) of the dash panel under the engine hood. Shows Vehicle Make, Model and Style; Month and Year of production; Vehicle Serial Number; approved seating capacity; and the Australian Design Rules with which the vehicle complies. (Refer illustration.)

Model Identification

Model Range	Model Identification	V.I.N. Code Number
Gemini Sedan	8TE69	8E69
Gemini 'SL' Sedan	8TF69	8F69
Gemini 'SL/X' Sedan	8TF69 & A9H	8F69

Engine Data

Engine Designation	1600
Piston Disp. Nom — Cu. Cms	1584
Comp. Ratio	8.7:1
Petrol Research Octane Rating	89
Number Cylinders	Four
Bore/Stroke mm	82.0 x 75.0
Taxable H.P. RAC or SAE	16.69
Kilowatts Gross @ R.P.M.	61 @ 5200
Torque Nm Gross @ R.P.M.	127 @ 3600
Cylinder Numbering (Front to Rear)	1 — 2 — 3 — 4
Firing Order	1 — 3 — 4 — 2

Vehicle Dimensions

Item	millimetres
Overall Length WAGON 4259 Sedan	4133
Overall Width All Models	1570
Overall Height* Sedan	1363
Wheelbase All Models	2404
Track Front Rear	1301 1305
Minimum Ground Clearance* Sedan	146

*At design load.

Wheel Nut Torques

Recommended Wheel Nut Torque is 100-108 Nm.

Capacities

Engine Oil	**Litres**
All Models — Service Refill	3.2
— Add for Filter	0.4
Manual Transmission	
4-Speed All Synchromesh	1.3
5-Speed All Synchromesh	1.6
Automatic Transmission	
Service Refill — approximate	1.7
Dry	6.0
Rear Axle	
All Models	1.4
Cooling system	
All Models	6.0
Pressure Rating of Radiator Cap	103 kPa
Fuel Tank	Litres
All Models	52
NOTE: Use fluid level for final check.	

Clearances and Settings

Engine Type	**1600**
Distributor	
Point Opening	.4/.5 mm
Cam Angle Dwell	52°
Valve Clearance	
Inlet — Cold	.15 mm
— Hot	.20 mm
Exhaust — Cold	.25 mm
— Hot	.30 mm
Spark Plug Gap	.7/.8 mm

Carburettor Mixture

The mixture control of the carburettor has been sealed and the idling speed set to comply with the Australian Design Rules. The reason for this is to conform to anti-pollution measures.

Your GMH Dealer has the full information concerning the foregoing.

Fuse System

Fuses

The fuse block is located behind a plastic cover at the lower right hand end of the instrument panel, below the hood release. To gain access to the fuses remove the cover by using the two tab grips.on either side of the cover. The fuses can be identified by referring to the fuse layout on the reverse side of the cover.

If, after replacing a burnt-out fuse, the new fuse burns out, this indicates that the fuse is still overloaded. The cause of the fault should be located and rectified by a GMH Dealer.

Fusible Link

In order to reduce the possibility of a fire, whether due to electrical causes or an accident, the wiring harness is protected by the inclusion of a fusible link, located in the harness next to the battery. In case of a short circuit, the link can melt internally, disconnecting the battery by the fusing action. The encasing insulation has been specially designed to withstand the temperature and to contain the fused wires. Thus the fusible link provides a combined fuse and fire protection feature.

Device or Circuit Protected	Feed Control	Fuse Capacity
Windshield Washer Windshield Wiper	ACC or ON on Ignition Switch	15 amps
Instrument Lights Auto. Trans. Console Light	ON on light switch	15 amps
Hazard Warning Lights Turn Signal Lights Cigarette Lighter	Battery	15 amps
Brake Warning Light Back-up Lamps Gauges/Indicators	ON on Ignition Switch	10 amps
Licence Plate Lamp Tail Lamps and Parking Lamps	ON on Light Switch	15 amps
Stop Lamps Horns/Clock Interior Lamps	Battery	15 amps
Radio	ACC or On on Ignition Switch	15 amps
Heater/Defroster Air Conditioner (where fitted)	ON on Ignition Switch	15 amps
Headlamps Switch	Battery	15 amps
Headlamp High Beam	Battery	15 amps
Headlamp Low Beam	Battery	15 amps

Headlamp and Bulb Specifications

Headlamps	Part Number	Power Rating
2 Lamp System — 178 mm Units		
178 mm Round Sealed Beam	94209545	50/40 watt
Rectangular Sealed Beam	94214882	65/55 watt

Bulbs	Part Number	Power Rating
Front Turn Signal	94023110	21 watt
Parking (Front)	94023816	5 watt
Tail (Sedan)	94023816	5 watt
Stop (Sedan)	94023110	21 watt
Rear Turn Signal (Sedan)	94023110	21 watt
Back-up (Sedan)	94023110	21 watt
Front Repeater Lamps	94024118	5 watt
Passenger Compartment (Dome Lamp)	94024119	10 watt
Licence Plate	94024118	5 watt
Headlamp High Beam Indicator	94021120	3.4 watt
Generator Charge Indicator	,,	3.4 watt
Oil Pressure Indicator	,,	3.4 watt
Brake Warning Indicator	,,	3.4 watt
Instrument Panel Illumination	,,	3.4 watt
Turn Signal Indicators	,,	3.4 watt
Auto. Trans. Floorshift Indicator	94021118	3.4 watt

N.B. Some of the bulbs listed are subject to model or option selection.

Bulb Replacement

Headlamps

This should be done by your GMH Dealer or a competent mechanic as the lights may need to be re-aimed.

Front Parking and Turn Signal Lamps

Unscrew the two screws and remove the lens.
Remove and replace bulb then replace lens.

Rear Stop/Tail, Turn Signal and Back-Up Lamps

You get to these through the luggage compartment (boot). Remove the bulb holders by twisting, and remove the bulb by turning it to the left.

Side Market Lamps

These are the ones at the front of the car on the side. Use a screwdriver to take off the lens. The bulb just pulls out.

Rear Number Plate Lamps

These should be replaced by your GMH Dealer or a competent mechanic.

Instrument Panel and Console Lamps

These should be replaced by your GMH Dealer or a competent mechanic.

Interior Dome Lamp

Gently prise off the lens with a small screwdriver, and pull the bulb straight out.

Section 9

Service and Maintenance

(Including Guardian Maintenance Owner Guide.)

Owner Maintenance and Responsibility

The following items should be checked weekly between services:

- Battery Electrolyte level
- Engine Oil level
- Cooling system level (radiator)
- Brake master cylinder fluid level
- Windshield washer reservoir level
- Battery terminals (for corrosion)
- Tyre pressures
- Condition of tyres

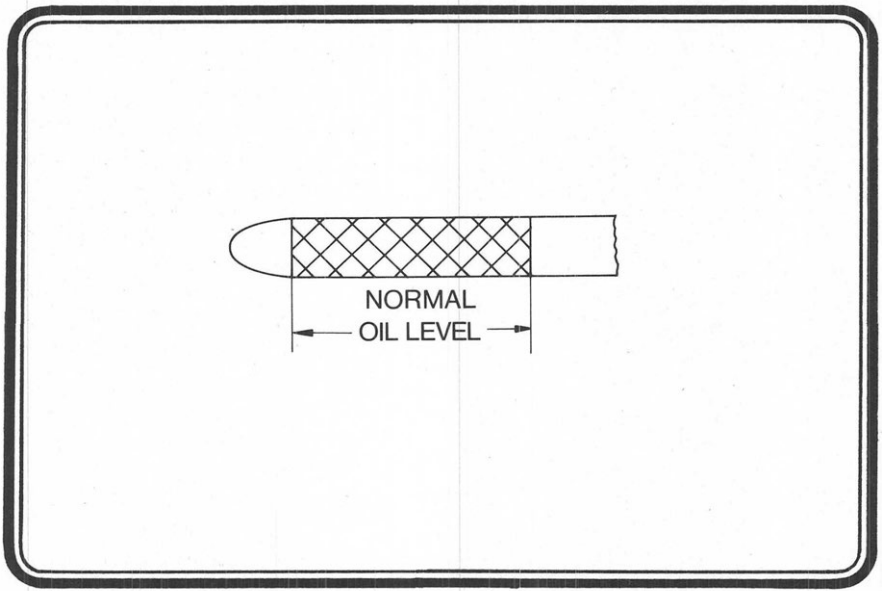
It is your responsibility to have your car serviced regularly and to ensure that the mechanic has attended to all points listed for that particular service. Not to do so may affect your warranty.

Service Dealer's Responsibility

Your Service Dealer must attend to all items listed for any particular service and must see that the validation coupon is signed.

Service coupons are in this book in the following section. This section contains notes and instructions for your use.

CAUTION: As with any machinery, extreme care should be taken when carrying out any inspections or maintenance job. If you have any doubts about your own ability, please have the job done by a qualified mechanic.


NORMAL
OIL LEVEL

Initial Oil Fill

At the factory, your car was filled with high quality SE oil. This should be changed at the first service and then changed at every 6 month or 10,000 km service.

Checking the oil level

Your oil level should be somewhere on the check-patterned section of the dip stick, not under, or over.

Ideally, the engine should be stopped for about 10 minutes before the oil level is checked. This gives the oil which has been circulating time to drain back into the oil pan.

Oil consumption

It is normal for your engine to use up oil between oil changes. It uses oil as a lubricant and as a coolant. Oil consumption will be higher than normal during the running-in period, and a car used for city driving will use oil if driven for some distance on a highway — especially if it's a warm day.

High speeds also use up oil.

If none of these factors applies to your car, and you feel it is using too much oil, see your GMH dealer about it.

Oil Filter Replacement

The oil filter should be replaced every six months or 10,000 kilometres — whichever comes first. After this replacement, add an extra 0.4 litre of oil.

If you drive under dusty conditions more frequent replacements may be necessary.

Oil Change Intervals

The amount of time between changes depends a lot on what you use the car for, and where it is driven.

The table indicates oil change intervals for cars used "normally".

If you usually drive on dusty roads; if you often take long trips; or — strangely enough — if you only use your car for to and from the office or the shops, you will need to change the oil more often. Say every month or every 5,000 kilometres.

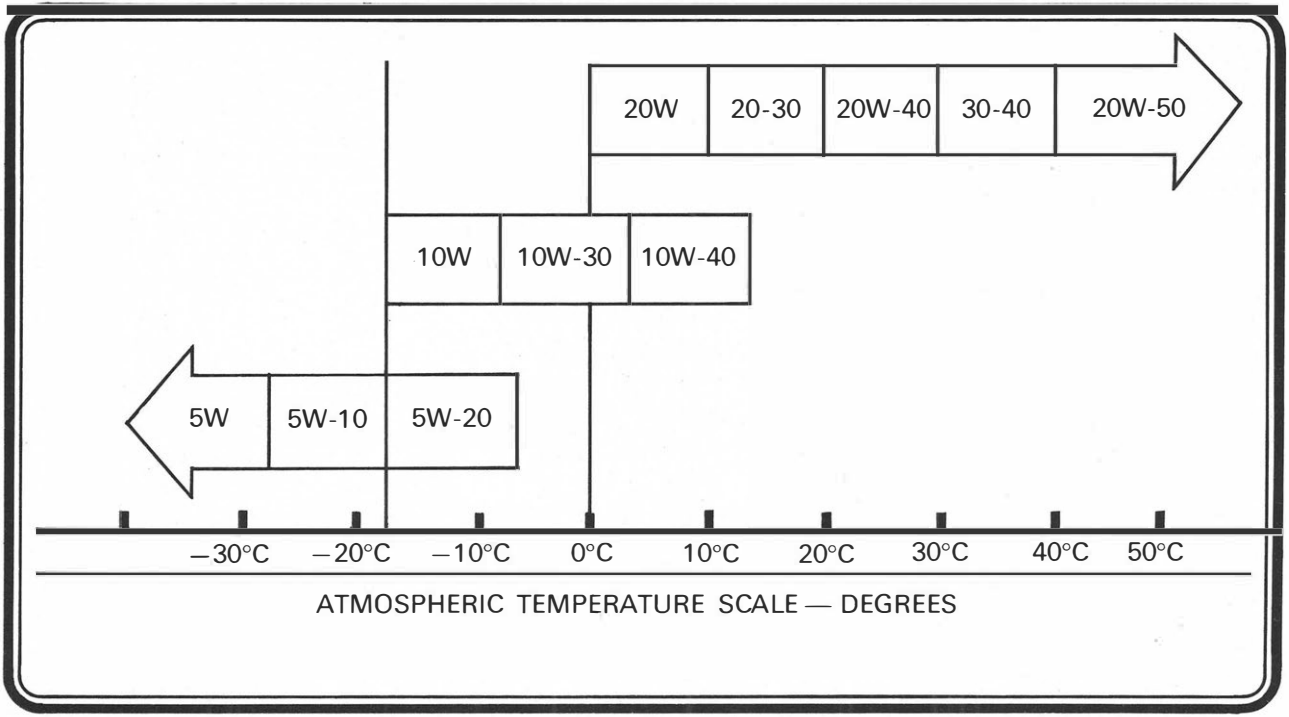
NORMAL OPERATING CONDITIONS

Prevailing Daytime Temperatures	Regular Oil Change Interval
ABOVE 10°C	EVERY 6 MONTH OR 10,000 KM — WHICHEVER OCCURS FIRST
BELOW 10°C	EVERY 1 MONTH OR 5000 KM — WHICHEVER OCCURS FIRST

ABNORMAL OPERATING CONDITIONS — EVERY 1 MONTH OR 5000 KM

Engine Oil Grades

The chart below is a guide to choosing a suitable oil.



Transmission Oils

Manuals

Check the oil level every six months or 10,000 kilometres whichever comes first — and add oil to the level of the plug hole if necessary.

The oil should be changed at the six months or 10,000 service, then every two years or 40,000 kilometres.

Automatics

Use only DEXRON® products. These are available from your GMH Dealer.

To check the fluid level:

First drive the car for several kilometres making frequent stops and starts. (A shopping trip would be ideal.)

Now pull up, put the car in PARK and leave the engine running while you check the dip stick. This is found under the bonnet near the driver's side, rear of the engine compartment.

If the level is at or below the ADD mark, add fluid until the stick reads FULL — it will take about .5 litre. Don't overfill.

Transmission fluid should be changed every two years or 40,000 km.

More often if you drive in the city in summer or use it to pull a caravan, or if you often leave it idling — like a taxi or patrol car.

Rear Axle Oil

This should be checked every six months or 10,000 km whichever comes first. If necessary, add oil to bring the level of the oil to the plug hole.

Cooling System

This must be serviced regularly if the engine is to operate efficiently.

Rust Protection

High purity water should be used with a GMH approved anti-rust fluid. If you live in an area where water has a high level of mineral or chemical content, use rainwater or distilled water.

If you need to use borewater in an emergency — change if for clean water as soon as possible.

Follow the directions on the pack when adding an anti-rust fluid.

Radiator Pressure Cap

Because of this cap your engine can work at over 100°C without boiling.

If your engine should overheat, refer to instructions on page 000.

Filling the cooling system

Check the coolant level when the engine is cold. Add just enough water to bring the level up to about 2 cm below the bottom of the filler neck.

Draining and Flushing

Every six months or 10,000 km drain and refill the radiator and add a GMH approved corrosion inhibitor coolant. To drain the radiator — loosen the cap, locate the lower radiator hose and loosen the clamp fastening this hose to the radiator. Now disconnect this hose.
To drain the engine — unscrew the drain plug which is on the passenger side of the engine block. It's next to the front of the engine mounting bracket. Remember to reconnect and tighten all hose clamps and drain plugs before refilling.
Danger: Even if you're stuck on the Birdsville Track without water you **must not drink the radiator water.**
Corrosion inhibitors and anti-freeze fluids are poisonous.

Anti-freeze Fluid

This is essential if your car is run for any length of time in snow areas.

The recommended brand — GM 1899M — can be supplied by your GMH Dealer.

It contains an anti-rust element as well.

If this product is not available and you need to park overnight in a snow area you must drain the main radiator and cylinder case. Otherwise, your radiator may burst or the cylinder case crack.
CAUTION: Draining of the main radiator and cylinder case assembly will not drain the water out of the heater radiator; therefore, the use of Anti-Freeze will eliminate the risk of a damaged heater core.

Your 12 Volt Battery

The battery is located in a metal cradle mounted on the left hand fender skirt in the engine compartment and the negative (—) terminal is "grounded". Never disconnect the battery or generator when the engine is running. Always connect Positive (+) to Positive (+), Negative (—) to Negative (—) whenever a battery charger is used.

Fluid Level

The battery fluid level should be maintained at 1 cm above the plates by adding distilled water. Distilled water will be required more frequently in summer than in winter. It is a good plan to check the fluid level at least once a week.

Maintenance

Wash your battery regularly with a mixture of water and either ammonia or baking soda. Rinse with clean water, dry, and rub a little vaseline round the battery posts and cable terminals. This will prevent corrosion. Do not hammer or otherwise drive a terminal onto its post.

Brake Master Cylinder

Fluid level should be checked regularly and kept at the LEVEL mark on the top part of the cylinder wall.

If the master cylinder needs constant topping up you could have a problem and should tell your GMH Dealer.

Air Cleaner

This should be replaced every six months or 10,000 km. More frequently if you drive in dusty conditions.
CAUTION: When the air cleaner is removed backfiring can cause fire in the engine compartment if the engine is started.

Evaporative Control System

Check all fuel and vapour lines every two years or 40,000 km. Replace them if necessary.

Lubricants and Filters

CHASSIS

ENGINE OIL
(Refer pages 74-78 for grades and application.)

MANUAL TRANSMISSION OIL
Duo grade 30/40 engine oil of SC, SD or SE quality.

AUTOMATIC TRANSMISSION FLUID
* DEXRON automatic transmission fluid only, identified also by Part No. 9985286 should be used for topping up or service refills.
* DEXRON is a registered trademark of General Motors.

REAR AXLE OIL
Use Multipurpose Hypoid gear oil in this order of preference, HN 1386 or HN 1187 or HN 1181 specification.

FRONT WHEEL BEARINGS
Grease to HN 1228 specification.

BRAKE FLUID
Fluid to GM 4653M Type 450 specification.

CONTROL SYSTEMS
Brake and Clutch Pedal Pivots, Clutch Linkage, Transmission Control Linkage, Accelerator Pivots, Parking Brake System, Pivot and Guides. Grease to HN 1225 (LG-2) specification.

BODY

Normal use of a vehicle causes metal-to-metal movement at certain points in the body. Noise, excessive wear and improper operation at these points will result when a protective film of lubricant is not provided. Servicing and lubrication of the undermentioned points should be an integral part of the lubrication service and should be checked out as required every 6 months or 10,000 kilometres.

POWDERED GRAPHITE
(Apply through key aperture)

Door Lock Cylinder
Instrument Panel Compartment Lock Cylinder
Rear Compartment Lid Lock Cylinder

NON-STAINING GREASE OR ZINC OXIDE GREASE
(Use sparingly on parts likely to be contacted by clothing)

Engine Hood Catch and Lock
Rear Compartment Hinges
Engine Hood and Door Hinges

SOLIDOIL
(Use sparingly on working surfaces)

Door Lock Fork
Door Lock Striker Bolt

IMPORTANT: Remove all lubricants that may have dropped or spread onto the external paint finish.

Tyres

Inside the lid of your glove box you will find a chart showing correct tyre inflation pressures for your car under different operating conditions.

Always check tyre pressure when the tyres are cold, and always use a tyre pressure gauge. Your eye can deceive.

Tyre Pressure Recommendations

1. Tyre pressures should be checked when the tyres are cold (when the vehicle has been standing for 3 hours or more, or driven less than 2 kilometres).
2. Tyre inflation pressure may increase as much as 30 kPa when hot, (after the vehicle has been driven 15 kilometres or at speeds of more than 95 km/h). DO NOT reduce pressures to compensate for this build up.
   As a guide for checking warm/hot tyres under all conditions, allow pressure to read 10% above that recommended.
3. For continuous high speed operation, over 120 km/h, increase tyre inflation pressure 30 kPa above the recommended pressures up to maximum of 275 kPa cold pressure.
4. To maximise the protection of tyres on vehicles operating for prolonged times over rough roads i.e. particularly in outback conditions, it is recommended that a cold tyre inflation pressure of 275 kPa is used.
5. Do not forget the spare tyre: It is advisable to maintain the spare at the **maximum recommended tyre inflation pressure** listed on the placard.

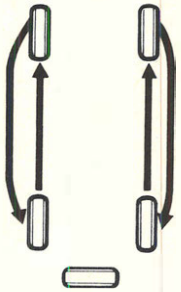
Tyre Rotation

If no abnormal or uneven wear is evident, if you have not experienced any vibration, tyres need not be rotated.

Front tyres are more prone to wear on the shoulder while rear tyres wear more on the crown. Wear can be evened out by rotating the tyres.

Check them at the 5,000 km inspection, then at intervals of 10,000 km. Your GMH Dealer will be able to diagnose any unusual signs of wear and can also balance the wheels and tyres for you.

RADIAL TYRE ROTATION



Tyre Speeds

The speed rating of a tyre are indicated by the following letters:

On bias-ply (conventional) tyres —
W — 135 km/h
— — 150 km/h
L — 160 km/h
S — 175 km/h
H — 200 km/h
*Winter tread

On radial-ply tyres —
W — 135 km/h
— — 170 km/h
S — 180 km/h
H — 210 km/h

Tyre Replacement

Use only tyres recommended on the chart inside the glove box.

Don't mix bias belted and bias tyres on your car and don't mix radial ply tyres with other types of tyres. New tyres should be fitted in pairs to the front but if replacing only one tyre, pair it with the least worn of the old tyres.

And if you replace all tyres with tyres of a different size, your speedometer readings may be affected. Have the car checked afterwards.

Tyres with a higher speed rating and/or with a maximum load rating in excess of that listed on the tyre placard for tyre size listed are also acceptable as replacements provided they are fitted to a suitable rim size.

For example —

MODEL	Gemini Sedan	Gemini SL
Base Tyre	YR78S13	YR78S13
Load* Rating (lb)	900 lb	900 lb
Optional Tyre	ZR70S13	ZR78S13
Load* Rating (lb)	1040 lb	970 lb

*Shown on the tyre.

Uneven or abnormal tyre wear is usually the result of incorrect inflation pressure, improper wheel alignment, wheels being out of balance, or poor driving habits. The original equipment tyres incorporate built-in tread wear bars which act as indicators to assist in determining when the tyres have worn to the point of needing immediate replacement.

When the wear bars appear, tyre replacement should not be delayed, in the interests of safety.

Radial Ply Tyres

Radial Ply Tyres have radial marked on them. Because of the stiffening belt under the tread the ride characteristics of Radial Ply Tyres may be somewhat different from that of conventional tyres.

The under-inflated appearance of the radial tyre is normal.

Tyres used at maximum speeds must be in good condition and not retreaded or regrooved. Refer to the chart inside your glove box for appropriate tyre pressures.

Radial Ply Tyres

These tyres may look under-inflated. This is their normal appearance. When driving in very rough country, radials should be inflated to maximum pressures to avoid damage to the sidewalls.

Heavy Treads

Take care with these. They should be used strictly as advised by the manufacturer.

See your GMH Dealer if you have any doubts.

Section 10:

Owner's Responsibility

Normal maintenance services, as listed in this servicing schedule contained on pages 89 and 90 in this Handbook, and replacement of service items, are the responsibility of the Owner and as such are NOT considered, under the provisions of the New Vehicle Warranty, to be rectification of defects in material and workmanship.

Items such as wheel alignment, brake adjustment as a result of lining wear, etc., which may require servicing due to fair wear and tear, will be carried out at the owner's cost.

We strongly recommend that you read the Warranty Certificate on page 54, so that you are conversant with your entitlements.

Water and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage, greatly contribute to the need for constant maintenance services to promote efficient vehicle operation. (Refer over.)

Operating Conditions

Normal Conditions

The maintenance instructions contained in this publication are based on the assumption that the vehicle will be used as designed and is operated in accordance with the instruction provided in the owner manual.

Extreme Conditions

Extreme operating can be described as that where a vehicle operates continually for a period of 1 month or 1500 kilometres under the following conditions:

Condition

1 Dust, dirt, loose road metal.
2 Muddy and wet areas.
3 Cold weather — below 10°C.
4 Stop-start, as experienced in inner city driving.
5 Caravan or Trailer hauling.

In such circumstances it is suggested that the following items be serviced more frequently than at the periods recommended in the Guardian Maintenance Plan.

Conditions	Items
1 — 3 — 4	Engine oil.
1	Engine oil filter.
1 — 2	Front suspension, steering, and parking brake system.
5	Automatic transmission fluid.
1	Engine air cleaner element.
1	Brake Servo air filter.
2	Front wheel bearings.
2	Manual transmission, drive line joints and rear axle.

If at any time it is considered that the above items or other items should be more frequently serviced due to the type of operation or before a long trip, discuss the situation with the service manager of your GMH Dealer.

Guardian Maintenance Plan

The 3-Step Service Concept

The fundamental points are:

1. A basic service interval period of 6 months or 10,000 kilometres whichever occurs first.
2. A "step" principle of 3 correlated services.
3. The frequency of these services is:

   "A" service items — Serviced every 6 months or 10,000 km
   "B" service items — Serviced every 12 months or 20,000 km
   "C" service items — Serviced every 24 months or 40,000 km

Service Designation	—A—	—B—	—C—
Items	Group I	Groups I & II	Groups I, II & III

Up to the 3rd step in the items programmed in the earlier steps are included.

The total time/distance range of this Guardian Maintenance Schedule is 66 months or 110,000 kilometres.

Total Programme

Pre-Delivery Service

1 Month — 1500 Kilometres Inspection and Adjustment

Then as required: (Months — km)

A @ 6-10,000
B @ 12-20,000
A @ 18-30,000
C @ 24-40,000
A @ 30-50,000
B @ 36-60,000
A @ 42-70,000
C @ 48-80,000
A @ 54-90,000
B @ 60-100,000
A @ 66-110,000

Guardian Maintenance

Once the first service has been completed, dependability and performance are influenced by the degree of maintenance the vehicle receives.

Safety, economy and dependability cannot be assured unless regular maintenance is performed, preferably by factory-trained technicians. It is preferable to receive these services from the Dealer from whom the vehicle was purchased. However, Guardian Maintenance will be attended to by any Authorised GMH Dealer on presentation of the Owner Handbook, no matter where you may be situated.

What The Owner Should Do

When service, according to the time or distance interval, is due, the owner should present this Owner Handbook to a GMH Dealer as an authority to have the items listed attended to. After this work is completed, the owner should see that the Validation Record is stamped and signed by the dealer. The Handbook with the Validations completed is evidence that a vehicle has been adequately maintained. This is important as it will not only assist in the determination of Warranty Claims, but enhance the value of the vehicle whenever resale is contemplated.

What The Servicing Dealer Has To Do

Attend to all items listed for the particular service. When this has been done, it is most important that the Owner Handbook Validation be signed by the dealer or his representative.

All operations listed on the Service Coupons should be carried out following the procedures set out in the appropriate service manual.

Guardian Maintenance Plan

Group I Under Hood Operations
Change engine oil.
Check all fluid levels accessible in engine compartment, e.g. brake, coolant, washer, battery electrolyte, auto transmission.
Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.*
Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
Wipe inside of distributor cap.
Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.*
Check operation and setting of idle stop solenoid.
Check operation of bimetal control valve in hot idle compensator system.
Check automatic choke for free operation.
Check accelerator controls for interference, binding or damage.
Fist "A" Service Only.* Check torque of carburettor mounting bolts. Check operation of EGR valve, where fitted.
Clean radiator core — check for blockages.
Drain and refill cooling system and recharge with inhibitor. Pressure test system.
Air Conditioning Only.* First "A" Service Only. Repeat pre-delivery check as outlined in the HQ Service Manual, Air Conditioning Section, Page 33.
All "A" Services after the first. Check sight glass for sufficient R-12 charge.

Group I Under Vehicle Operations
Change engine oil filter.
Manual Transmission Only. Check oil level.
Check rear axle oil level.
Inspect front suspension and steering joints. Check joint seals and covers for damage.
Lubricate accelerator, transmission shift and clutch linkages as applicable.
Check parking brake operation and lubricate system. Adjust if necessary.*
Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
Inspect engine and transmission mountings.
Check torque of rear suspension link attaching bolts.
Check torque of propeller shaft flange bolts.
Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required.* Check inflation pressures and torque wheel nuts.
Disc Brakes — Inspect pads for wear.

Group I Interior Vehicle Operations
Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.*
Station Wagon.* Check rear seat movement and lock operation.

Group I Exterior Vehicle Operations
Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock as required.
Check door drain holes and rocker sill vents for blockage using a blunt probe.
Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

Guardian Maintenance Plan

Group II Under Hood Operations
Lubricate distributor. Check condition of cap and rotor. Check TVRS cables for resistance. Replace spark plugs and distributor points.
EGR System Only.* Clean valve and manifold opening.
Check and adjust if necessary auto choke settings.
Check and adjust if necessary engine idle speed.
Check and adjust if necessary fast idle speed on choke cam.
Check torque of manifold mounting bolts, cylinder head bolts and rocker shaft nuts. Check valve lash.
Manual Transmission Only. Check clutch outer cable (upper) setting for operating clearance. Adjust if necessary.
Air Conditioning Only.* Inspect condenser to ensure that it is not plugged with leaves or other foreign material. Check evaporator drain tube for dirt and other restrictions. Inspect flexible hose lines for leaks and brittleness.

Group II Under Vehicle Operations
Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.
Inspect front wheel bearings and check adjustment. Repack only if necessary.*
Lubricate brake and clutch pedal springs, clutch bushing and clevis pin, as applicable.

Group III Under Hood Operations
Replace air cleaner element if not yet changed in previous 24/20 period.
Evaporative control system. Check all fuel and vapour lines and hoses for proper connections and correct routing as well as condition. Replace damaged or deteriorated parts as necessary. Ensure control valve is clear and operative.
Replace distributor cap and rotor.

Group III Under Vehicle Operations
Repack front wheel bearings.
Inspect steering gear, linkage and dust covers for wear and security. Notify owner of any deficiencies, including loss of steering preload, for immediate rectification.*
Auto Transmission Only.* Drain and refill fluid, adjust band and clean filter.
Manual Transmission Only. Change Oil.

*Additional Service — refer page 117

N.B. It should be understood that whenever a B or C service is being carried out, some items on an earlier operation, may be superseded or modified by a later operation.

Pre-Delivery Operations

New Vehicle Preparation Validation

Your new vehicle has been inspected and prepared for delivery by your Dealer, in accordance with the manufacturer's New Vehicle Pre-Delivery Procedures.

Service Manager's Signature.....

Date.....P.T.O.

Check, and adjust if necessary, the following items:

Under Hood Operations
Oil levels of engine, auto trans, brake master cylinders, and Battery Electrolyte level.
Hose connections, fill radiator and windshield washer reservoir. Ensure corrosion inhibitor is present in radiator.
Air filter element and/or oil level in oil bath cleaners and breathers.
Engine idle speed.
Air Conditioning as outlined in the HQ Service Manual, Air Conditioning Section, Page 33.

Under Vehicle Operations
Oil, fuel, water and exhaust leaks.
Lubrication and operation of steering gear from lock to lock, if excessive free travel evident, adjust steering.
Oil levels in transmission and rear axle.
Brake line connections — check hoses for correct clearance.
Brakes — foot and park.
Inspect tyres and inflate to recommended pressures. Check toe-in.
Tighten wheel nuts to specified torque.

Interior of Vehicle
Operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
Neutral safety switch and transmissions parking pawl.
Heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
Operation of all lights, including turn signals; C/A headlamp aim.
Inspect body trim and instrument panel; touch-up paint as necessary.
Fit of floor mats and completely clean the interior of the vehicle.
Station Wagon Only — Check rear seat movement and lock operation.

Exterior of Vehicle
Wash vehicle, check paint, brush touch-up and minor repair as necessary and polish.

Road Test
Operation of seat belt emergency locking retractors. Road test for engine, braking, and steering performance, operation of Air Conditioning (where fitted), rattles and squeaks, **and correct if necessary.**
Steering wheel spoke position.
Vehicles fitted with Automatic Transmission — check shift pattern. Manual Transmission — check gear shift operation.
Clean steering wheel and control levers.
Check Tool and Jack stowage.

Mechanic's Signature..... Date.....

Delivery Certificate

The dealer has completed the vehicle identification certificate, explained to the purchaser the terms and conditions of the General Motors-Holden's Sales Pty Ltd, New Vehicle Warranty and Notices and the contents of the Owner's Handbook. The dealer has informed the purchaser of his responsibility in respect of vehicle maintenance.

The dealer has demonstrated to the purchaser the operation of the vehicle and of all options and accessories.

The purchaser has been informed in writing of the fitting of any and all equipment or accessories not of GMH manufacture, and of any alterations or modifications which have been made to the vehicle and the effect on the GMH Sales New Vehicle Warranty of such fitting, alteration or modification.

Vehicle delivered in accordance with this delivery procedure.

Purchaser's Signature .....

Date .....

Delivered by: Signature .....

Date: .....

1 Month — 1500 Kilometre Inspection & Adjustment

This coupon should not be removed until the vehicle is presented for service.

Owner's Name Mr. Mrs. Miss .....

Address .....

Town & State ..... Postcode.....

Reg. No.....Model Name.....

V.I.N. .....Eng. No. .....

Selling Dealer's Stamp & Signature.....

Date of Acquisition .....

This vehicle has been thoroughly checked in accordance with the schedule on the reverse side of this coupon.

Servicing Dealer .....

Town .....State.....

Owner's Signature .....

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1 Month — 1500 Kilometre Inspection and Adjustment

This vehicle has been thoroughly checked in accordance with the 1 month — 1,500 kilometre inspection and adjustment.

Dealer.....

Service Manager's Signature .....

Date.....Odometer Reading.....

1 Month — 1500 Kilometre Inspection and Adjustment

Under Hood Operations
Change Engine Oil.
Check all Fluid Levels accessible in Engine Compartment.
Check Air Cleaner Element for Restriction under Extreme Dusty Conditions.
Check all Hose Clips in Engine Compartment. (Use Torque Wrench where applicable.)
Check Distributor Dam Dwell and Timing, Engine Idle Speed and Fast Idle Speed on Choke Cam. Adjust if necessary.
Check Condition and Tension of all Engine Drive Belts — using Tension Gauge.
Check and Adjust Hood Lock and Safety Catch and Lubricate.
With Engine cold check torque of the cylinder head bolts.
With Engine at normal operating temperature check torque of the manifold nuts and adjust valve lash.

Under Vehicle Operations
Lubricate Front Suspension, (Ball and Steering Joints — where applicable).
Check Transmission and Rear Axle Oil levels.
Inspect all Brake Line Connections and Hoses for Leakage and Clearance.
Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
Check Steering Connections.
(Manual Transmission Only) **Check and Adjust Clutch Fork Operating Rod. Free Travel.**

Interior Vehicle Operations
Check operation of Instruments, Lights, Turn Signals, Horn, Windshield Wipers and Washers, Seat Belts, Seat Adjustment Mechanisms and Mirrors.
Check Operation of Parking Brake.
Station Wagon Only — Check rear seat movement and lock operation.

Exterior Vehicle Operations
Check Headlamp Aim. Adjust if necessary.
Check Door and Boot, Lock Operation, Striker Plates, Handles, etc. and Lubricate.

Road Test Programme
All Rattles, Squeaks, Vibrations and Noises should be checked and rectified.
Check operation of vehicle on the road for efficient operation of Brakes, Steering, Engine Response, Transmission Operation and Gear Selection or Shift Pattern.

This Inspection and Adjustment will be carried out without charge to the owner except for any lubricants used. The Designated Servicing Programme is not to be exceeded without the Owner's prior agreement to additional servicing charges.

6 Months or 10,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

6 Months — 10,000 Kilometre Service

	Under Hood Operations
	Change engine oil.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Wipe inside of distributor cap.
*	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check operation and settingof idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Check automatic choke for free operation.
	Check accelerator controls for interference, binding or damage.
*	Check torque of carburettor mounting bolts. Check operation of EGR valve, where fitted.
	Clean radiator core — check for blockages.
	Drain and refill cooling system and recharge with inhibitor. Pressure test system.
*	Air Conditioning Only — Repeat pre-delivery check as outlined in HQ Service Manual. Air Conditioning Section, Page 33.

	Under Vehicle Operations
	Change engine oil filter.
	Manual Transmission Only — Check oil level.
	Check rear axle oil level.
	Inspect front suspension and steering joints. Check joint seals and covers for damage.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
*	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.

A Service

P.T.O.

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.

	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates. Hood lock and catch and luggage compartment lock as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

Additional Service — refer page 117

12 Months or 20,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

B SERVICE

12 Months — 20,000 Kilometre Service

	Under Hood Operations
	Change engine oil
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Check torque of manifold mounting bolts, cylinder head bolts and rocker shaft nuts. Check valve lash.
	Lubricate distributor. Check condition of cap and rotor. Wipe inside of distributor cap. Check TVRS cables for resistance. Replace spark plugs and distributor points.
*	EGR System Only — Clean valve and manifold opening.
*	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check operation and setting of idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Auto Choke — Check choke for free operation. Check and adjust if necessary choke settings. Check and adjust if necessary fast idle speed on choke cam.
	Check and adjust if necessary engine idle speed.
	Check accelerator controls for interference, binding or damage.
	Manual Transmission Only — Check clutch outer cable (upper) setting for operating clearance. Adjust if necessary.
	Clean radiator core — check for blockages.
	Drain and refill cooling system and recharge with inhibitor. Pressure test system.
*	Air Conditioning Only — Inspect condenser to ensure that it is not plugged with leaves or other foreign material. Check evaporator drain tube for dirt and other restrictions. Inspect flexible hose lines for leaks and brittleness. Check sight glass for sufficient R-12 charge.

	Under Vehicle Operations
	Change enginer oil filter.
	Manual Transmission Only — Check oil level.
	Check rear axle oil level.
	Inspect front suspension and steering joints. Check joint seals and covers for damage.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Lubricate brake and clutch pedal springs, clutch bushing and clevis pin, as applicable.
*	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.

B Service

	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.
*	Inspect front wheel bearings and check adjustment. Repack only if necessary.
	Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.

Interior Vehicle Operations

	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.

Exterior Vehicle Operations

	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

Additional Service — refer page 117

18 Months or 30,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

18 Months — 30,000 Kilometre Service

	Under Hood Operations
	Change engine oil.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Wipe inside of distributor cap.
*	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check operation and setting of idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Check automatic choke for free operation.
	Check accelerator controls for interference, binding or damage.
	Clean radiator core — check for blockages.
	Drain and refill cooling system and recharge with inhibitor.
	Pressure test system.
*	Air Conditioning Only — Check sight glass for sufficient R-12 charge.

	Under Vehicle Operations
	Change engine oil filter.
	Manual Transmission Only — Check oil level.
	Check rear axle oil level.
	Inspect front suspension and steering joints. Check joint seals and covers for damage.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
*	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.

A Service

P.T.O.

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.

	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

Additional Service — refer page 117

24 Months or 40,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

SERVICE

24 Months — 40,000 Kilometre Service

	Under Hood Operations
	Change engine oil.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Check torque of manifold mounting bolts, cylinder head bolts and rocker shaft nuts. Check valve lash.
	Lubricate distributor. Replace distributor cap and rotor. Check TVRS cables for resistance. Replace spark plugs and distributor points.
*	EGR System Only — Clean valve and manifold opening.
	Replace air cleaner element if not yet changed in previous 24/40 period.
	Check operation and setting of idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Auto Choke — Check choke for free operation. Check and adjust if necessary choke settings. Check and adjust if necessary fast idle speed on choke cam.
	Check and adjust if necessary engine idle speed.
	Check accelerator controls for interference, binding or damage.
	Manual Transmission Only — Check clutch outer cable (upper) setting for operating clearance. Adjust if necessary.
	Clean radiator core — check for blockages.
	Drain and refill cooling system and recharge with inhibitor. Pressure test system.
*	Air Conditioning Only — Inspect condenser to ensure that it is not plugged with leaves or other foreign material. Check evaporator drain tube for dirt and other restrictions. Inspect flexible hose lines for leaks and brittleness. Check sight glass for sufficient R-12 charge.
	Evaporative control system. Check all fuel and vapour lines and hoses for proper connections and correct routing as well as condition. Replace damaged or deteriorated parts as necessary. Ensure control valve is clear and operative.

	Under Vehicle Operations
	Change engine oil filter.
	Manual Transmission Only — Change oil.
*	Auto Transmission Only — Drain and refill fluid, adjust band and clean filter.
	Check rear axle oil level.
	Inspect front suspension and steering joints. Check joint seals and covers for damage.

Service

	Inspect steering gear, linkage and dust covers for wear and security. Notify owner of any deficiencies, including loss of steering preload, for immediate rectification.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Lubricate brake and clutch pedal springs, clutch bushing and clevis pin, as applicable.
*	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.
	Repack front wheel bearings.
	Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.

Interior Vehicle Operations

	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.
	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

*Additional Service — refer page 117

30 Months or 50,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

30 Months — 50,000 Kilometre Service

	Under Hood Operations
	Change engine oil.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Wipe inside of distributor cap.
*	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check operation and setting of idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Check automatic choke for free operation.
	Check accelerator controls for interference, binding or damage.
	Clean radiator core — check for blockages.
	Drain and refill cooling system and recharge with inhibitor.
	Pressure test system.
*	Air Conditioning Only — Check sight glass for sufficient R-12 charge.

	Under Vehicle Operations
	Change engine oil filter.
	Manual Transmission Only — Check oil level.
	Check rear axle oil level.
	Inspect front suspension and steering joints. Check joint seals and covers for damage.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
*	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.

A Service

P.T.O.

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiences observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.

	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates. Hood lock and catch and luggage compartment lock as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

Additional Service — refer page 117

36 Months or 60,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

B SERVICE

36 Months — 60,000 Kilometre Service

	Under Hood Operations
	Change engine oil.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Check torque of manifold mounting bolts, cylinder head bolts and rocker shaft nuts. Check valve lash.
	Lubricate distributor. Check condition of cap and rotor. Wipe inside of distributor cap. Check TVRS cables for resistance. Replace spark plugs and distributor points.
*	EGR System Only — Clean valve and manifold opening.
*	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check operation and setting of idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Auto Choke — Check choke for free operation. Check and adjust if necessary choke settings. Check and adjust if necessary fast idle speed on choke cam.
	Check and adjust if necessary engine idle speed.
	Check accelerator controls for interference, binding or damage.
	Manual Transmission Only — Check clutch outer cable (upper) setting for operating clearance. Adjust if necessary.
	Clean radiator core — check for blockages.
	Drain and refill cooling system and recharge with inhibitor. Pressure test system.
*	Air Conditioning Only — Inspect condenser to ensure that it is not plugged with leaves or other foreign material. Check evaporator drain tube for dirt and other restrictions. Inspect flexible hose lines for leaks and brittleness. Check sight glass for sufficient R-12 charge.

	Under Vehicle Operations
	Change engine oil filter.
	Manual Transmission Only — Check oil level.
	Check rear axle oil level.
	Inspect front suspension and steering joints. Check joint seals and covers for damage.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Lubricate brake and clutch pedal springs, clutch bushing and clevis pin, as applicable.
*	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.

B Service

	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.
*	Inspect front wheel bearings and check adjustment. Repack only if necessary.
	Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.

Interior Vehicle Operations

	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.

Exterior Vehicle Operations

	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

*Additional Service — refer page 117

42 Months or 70,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

42 Months — 70,000 Kilometre Service

	Under Hood Operations
	Change engine oil.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Wipe inside of distributor cap.
*	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check operation and setting of idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Check automatic choke for free operation.
	Check accelerator controls for interference, binding or damage.
	Clean radiator core — check for blockages.
	Drain and refill cooling system and recharge with inhibitor.
	Pressure test system.
*	Air Conditioning Only — Check sight glass for sufficient R-12 charge.

	Under Vehicle Operations
	Change engine oil filter.
	Manual Transmission Only — Check oil level.
	Check rear axle oil level.
	Inspect front suspension and steering joints. Check joint seals and covers for damage.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
*	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.

A Service

P.T.O.

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiences observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.

	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates. Hood lock and catch and luggage compartment lock as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

Additional Service — refer page 117

48 Months or 80,000 km

Dealer.....

Date.....

Odometer.....

Signed.....

SERVICE

48 Months — 80,000 Kilometre Service

	Under Hood Operations
	Change engine oil.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Check torque of manifold mounting bolts, cylinder head bolts and rocker shaft nuts. Check valve lash.
	Lubricate distributor. Replace distributor cap and rotor. Check TVRS cables for resistance. Replace spark plugs and distributor points.
*	EGR System Only — Clean valve and manifold opening.
	Replace air cleaner element if not yet changed in previous 24/40 period.
	Check operating and setting of idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Auto Choke — Check choke for free operation. Check and adjust if necessary choke settings. Check and adjust if necessary fast idle speed on choke cam.
	Check and adjust if necessary engine idle speed.
	Check accelerator controls for interference, binding or damage.
	Manual Transmission Only — Check clutch outer cable (upper) setting for operating clearance. Adjust if necessary.
	Clean radiator core — check for blockages.
	Drain and refill cooling system, and recharge with inhibitor. Pressure test system.
*	Air Conditioning Only — Inspect condenser to ensure that it is not plugged with leaves or other foreign material. Check evaporator drain tube for dirt and other restrictions. Inspect flexible hose lines for leaks and brittleness. Check sight glass for sufficient R-12 charge.
	Evaporative control system. Check all fuel and vapour lines and hoses for proper connections and correct routing as well as condition. Replace damaged or deteriorated parts as necessary. Ensure control valve is clear and operative.

	Under Vehicle Operations
	Change engine oil filter.
	Manual Transmission Only — Change oil.
*	Auto Transmission Only — Drain and refill fluid, adjust band and clean filter.
	Check rear axle oil level.

Service

	Inspect front suspension and steering joints. Check joint seals and covers for damage.
	Inspect steering gear, linkage and dust covers for wear and security. Notify owner of any deficiencies, including loss of steering preload, for immediate rectification.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Lubricate brake and clutch pedal springs, clutch bushing and clevis pin, as applicable.
*	Check parking brake operation and lubrication system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.
	Repack front wheel bearings.
	Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.

Exterior Vehicle Operations

	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

**Additional Service — refer page 117*

54 Months or 90,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

54 Months — 90,000 Kilometre Service

	Under Hood Operations
	Change engine oil.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Wipe inside of distributor cap.
*	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check operation and setting of idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Check automatic choke for free operation.
	Check accelerator controls for interference, binding or damage.
	Clean radiator core — check for blockages.
	Drain and refill cooling system and recharge with inhibitor.
	Pressure test system.
*	Air Conditioning Only — Check sight glass for sufficient R-12 charge.

	Under Vehicle Operations
	Change engine oil filter.
	Manual Transmission Only — Check oil level.
	Check rear axle oil level.
	Inspect front suspension and steering joints. Check joint seals and covers for damage.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
*	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.

A Service

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.

	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment locks as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

Additional Service — refer page 117

60 Months or 100,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

B SERVICE

60 Months — 100,000 Kilometre Service

	Under Hood Operations
	Change engine oil.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Check torque of manifold mounting bolts, cylinder head bolts and rocker shaft nuts. Check valve lash.
	Lubricate distributor. Check condition of cap and rotor. Wipe inside of distributor cap. Check TVRS cables for resistance. Replace spark plugs and distributor points.
*	EGR System Only — Clean valve and manifold opening.
	Check operation and setting of idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Auto Choke — Check choke for free operation. Check and adjust if necessary choke settings. Check and adjust if necessary fast idle speed on choke cam.
	Check and adjust if necessary engine idle speed.
	Check accelerator controls for interference, binding or damage.
	Manual Transmission Only — Check clutch outer cable (upper) setting for operating clearance. Adjust if necessary.
	Clean radiator core — check for blockages.
	Drain and refill cooling system and recharge with inhibitor. Pressure test system.
*	Air Conditioning Only — Inspect condenser to ensure that it is not plugged with leaves or other foreign material. Check evaporator drain tube for dirt and other restrictions. Inspect flexible hose lines for leaks and brittleness. Check sight glass for sufficient R-12 charge.

	Under Vehicle Operations
	Change engine oil filter.
	Manual Transmission Only — Check oil level.
	Check rear axle oil level.
	Inspect front suspension and steering joints. Check joint seals and covers for damage.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Lubricate brake and clutch pedal springs, clutch bushing and clevis pin, as applicable.
*	Check parking brake operation and lubricate system. Adjust if necessary.

B Service

	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.
*	Inspect front wheel bearings and check adjustment. Repack only if necessary.
	Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.

Interior Vehicle Operations

	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.

Exterior Vehicle Operations

	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

Additional Service — refer page 117

66 Months or 110,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

66 Months — 110,000 Kilometre Service

	Under Hood Operations
	Change engine oil.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission.
*	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Wipe inside of distributor cap.
*	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check operation and setting of idle stop solenoid.
	Check operation of bimetal control valve in hot idle compensator system.
	Check automatic choke for free operation.
	Check accelerator controls for interference, binding or damage.
	Clean radiator core — check for blockages.
	Drain and refill cooling system and recharge with inhibitor.
	Pressure test system.
*	Air Conditioning Only — Check sight glass for sufficient R-12 charge.

	Under Vehicle Operations
	Change engine oil filter.
	Manual Transmission Only — Check oil level.
	Check rear axle oil level.
	Inspect front suspension and steering joints. Check joint seals and covers for damage.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
*	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check torque of rear suspension link attaching bolts.
	Check torque of propeller shaft flange bolts.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Disc Brakes — Inspect pads for wear.

A Service

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
*	Station Wagon Only — Check rear seat movement and lock operation.

	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock as required.
	Check door drain holes and rocker sill vents for blockage using a blunt probe.
	Check operation of the vehicle on the road for even braking and steering, clutch and transmission operation and engine response. Check mirrors, seat adjustment and automatic transmission shift pattern.

Additional Service — refer page 117

Suggested Labour Times

For Work Performed During Guardian Maintenance Services

"A" SERVICE — BASIC SERVICE TIME — 1.3 HR.

"B" SERVICE — BASIC SERVICE TIME — 2.8 HR.

"C" SERVICE — BASIC SERVICE TIME — 3.9. HR.

THE OWNER WILL BE CHARGED FOR LUBRICATIONS AND MATERIALS USED PLUS LABOUR.
AT THE TIMES RECOMMENDED ABOVE.

***ADDITIONS TO BASIC SERVICE**
ADDITIONAL TIME AND MATERIAL REQUIRED FOR SERVICING OPTIONAL EQUIPMENT OTHER THAN THAT FITTED TO A BASIC GEMINI SEDAN AND REPAIRING OR REPLACING ANY PART FOUND FAULTY DURING THE SERVICE INSPECTION WILL BE ADDED TO THE SUGGESTED LABOUR TIME AND CHARGES.

WHERE ANY DEFICIENCIES ARE NOTED SUCH ITEMS SHOULD BE REPORTED TO THE OWNER/OPERATOR SO THAT THE EXTRA WORK REQUIRED CAN BE AUTHORISED.

***ADDITIONAL SERVICES & TIMES WHERE APPLICABLE:**

FIRST "A" SERVICE	0.1 HR.
PARKING BRAKE ADJUSTMENT	0.1 HR.
AIR CONDITIONING — 1st "A" SERVICE	0.1 HR.
AIR CONDITIONING INSPECTION	0.1 HR.
AUTO TRANSMISSION "C" SERVICE	0.6 HR.
ENGINE OIL FILTER REMOVAL — AIR CONDITIONING FITTED	0.2 HR.
EGR SYSTEM CHECK "B" SERVICE	0.2 HR.
FRONT WHEEL BEARING REPACK — "B" SERVICE	0.5 HR.

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*Inside Back Cover.

NOTES

Gemini Diesel

Supplement to

TE GEMINI
OWNER HANDBOOK

IMPORTANT

THIS SUPPLEMENT MUST BE READ IN CONJUNCTION WITH THE TE GEMINI OWNER HANDBOOK.

PART NO. 92017080

Feb. 1981

THE DIESEL ENGINE

The petrol-burning, reciprocating-piston engine is used in most passenger cars, but it is by no means the only type of engine. Late in the 19th Century, when this engine design emerged as the motive power for road vehicles, engineers were already working on alternatives. These development activities continue today on a wide scale.

The diesel or compression-ignition engine resembles the petrol engine more closely than any other type. It is another form of the reciprocating internal combustion engine. The diesel is widely employed in commercial vehicles, ships, railway engines and as yet to a lesser degree in cars and light commercial vehicles.

In the diesel engine, only air enters the cylinder on the intake stroke and this air is compressed on the compression stroke. Compression ratios range from 16:1 to 25:1. This produces pressures of about 40 kg/cm^2 at the top of the compression stroke. When air is rapidly compressed to this pressure it reaches a temperature of about 550°C. This is sufficient to ignite the fuel oil which is sprayed into the heated air. No separate ignition system is required because the oil is ignited by the heat created by compressing the air. The fuel used is closely related to petrol, but it is a heavier type of hydrocarbon.

Just prior to the top of the compression stroke, a precisely measured amount of fuel is injected into the combustion chamber in the form of a fine spray, at a pressure of 100-250 kg/cm^2. It ignites instantly and continues to burn as long as fuel is sprayed into the combustion chamber. The expanding gases force the piston down on the power stroke and they are expelled on the exhaust stroke.

The compression-ignition engine is considerably more economical to operate than a petrol engine because the high compression ratio assures better thermal efficiency.

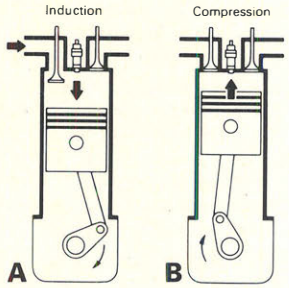
In the petrol engine, where a mixture of air and fuel is compressed, the highest allowable compression ratio is about 10:1. When the compression ratio is increased over 10:1 knocking results.

On the other hand, the diesel engine requires a much higher compression ratio to generate the high temperatures needed for fuel ignition. This creates better thermal efficiency.

How a Diesel Engine Works

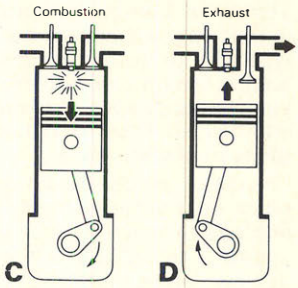
A With the Diesel fuel injection system, air is inducted into the cylinder by the piston moving down.

B The air is then compressed at a ratio of about 20.0:1.



C The fuel injection nozzle injects the diesel fuel into the cylinder. With the highly compressed air, combustion then takes place.

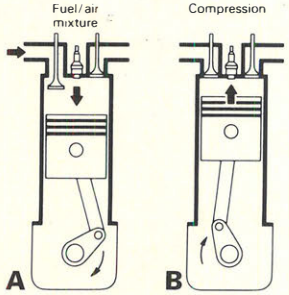
D Exhausted gases are then expelled.



How a Petrol Engine Works

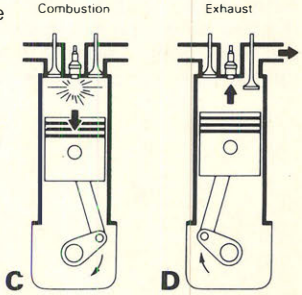
A The petrol and air mixture is fed into the combustion chamber through the carburettor.

B The petrol/air mixture is then compressed at a ratio of about 8.5:1.



C The spark plug, fired by the electrical system, ignites petrol/air mixture for combustion.

D The exhaust gases are then expelled.



Why a Diesel Engine needs Pre-heating

As mentioned earlier, a diesel runs on compressed air and fuel oil. As the air is compressed in the cylinder, it heats up. When the cylinder is already warm a diesel will start quickly, but when the cylinder is cold, starting takes a few seconds longer. As it is impossible to raise the air temperature in the cylinder to starting temperature by compression alone the diesel uses a heater or glow plug to raise it high enough for starting.

Diesel fuel: Diesel fuel, will ignite at temperatures of 320-350° Centigrade without any electric starting devices.

Petrol: Petrol ignites at temperatures of 600-650° Centrigrade, but ignition can only be achieved through an electric current fed into the combustion chambers via sparking plugs.

Diesel's Better Fuel Economy

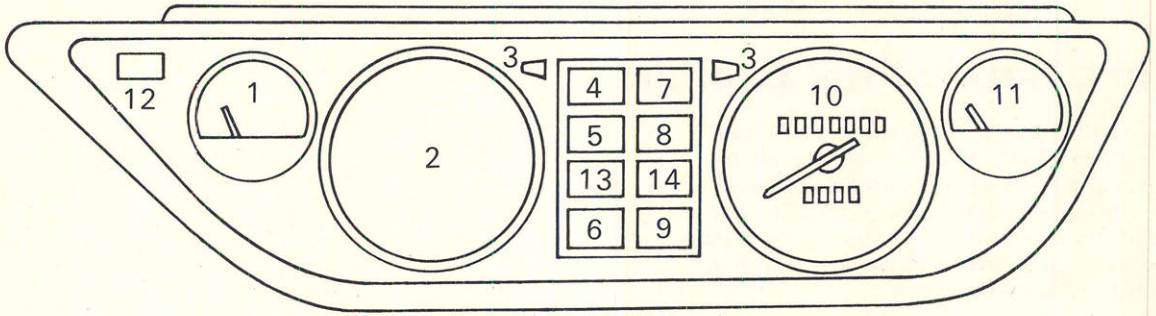
The diesel's better fuel economy owes much to the engine's high compression ratio, more than double that of a petrol engine. In other words, the diesel burns fuel more efficiently than a petrol engine. The higher compression ratio burns fuel more quickly increasing the temperature inside the combustion chamber which in turn generates more horsepower.

Instrument Panel—Diesel

Additional instruments are provided on Diesel engined cars and you should familiarize yourself with them before starting and driving the vehicle.

1. Fuel Gauge.
2. Clock or Tachometer.
3. Turn Signal Indicators.
4. Generator Warning Lamp.
5. Park-Brake "On" Indicator.
6. Rear Window Demister "On" Indicator.
7. Oil Warning Lamp.
8. Brake Failure Warning Lamp.
9. Hi-Beam Indicator Lamp.
10. Speedometer and Tripmeter.
11. Temperature Gauge.
12. Filter Sedimentor Indicator Lamp.*
13. Fuel Warning Lamp.*
14. Glow Plug Indicator Lamp.*

* Diesel Engines Only.



*Filter (Sedimentor) Indicator Light (Number 12)

When the sedimentor attached to the fuel filter is filled with more than 80 cc of water, the "FILTER" indicator lamp will light up.

NOTE: If this warning signal lights up while you are driving, find a safe place to park. See instructions on page 9 on how to discharge water from the sedimentor.

*Fuel Indicator Lamp (Number 13)

This lamp lights up when the fuel is low and needs replenishing.

*Glow Plug Indicator Lamp (Number 14)

This lamp lights up when the ignition is turned to the "ON" position and stays alight until the engine is heated. When the light goes out you may start the engine.

DO NOT try to start the engine until the light is out.

*Diesel Engines Only.

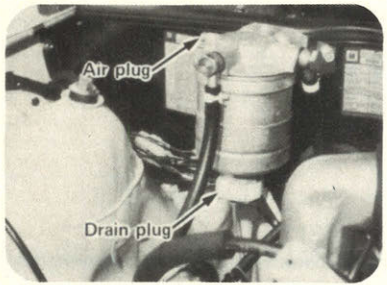
STARTING

1. Apply the parking brake.
2. Place transmission in neutral and hold clutch pedal to the floor throughout the starting procedure.
3. Turn the starter key to ON position.
   Checking to see if the oil pressure indicator light, generator indicator light and filter indicator light turn on.
   The glow indicator light will light and then go off in about 0.3 seconds if the engine is warm, or in about 3.5 seconds if the engine is cold.
4. As soon as the glow indicator light has gone off, fully depress the accelerator pedal and clutch pedal to start the engine.
5. Crank the engine by turning the starter switch to start. Release the key as soon as the engine starts. The starter switch will return automatically to ON position.
6. When the engine starts, depress the accelerator pedal part way down and check to be sure that the oil pressure indicator light and generator indicator light go out.

IN CASE OF EMERGENCY

How to Discharge Water from the Sedimentor attached to the Fuel Filter

The fuel filter has a sedimentor chamber for settling water separated from fuel.



When the "FILTER" indicator lamp on the instrument panel lights up, water in the sedimentor chamber must be drained. The sedimentor is located beneath the fuel filter, located on the fire wall in the engine compartment.

1. When warning lamp on the instrument panel is lighted, unscrew drain plug and hand pump, then move hand pump back and forth until 60 cc to 100 cc water has been drained out.
2. After draining is completed, screw in drain plug and hand pump and check for fuel leakage, and also ensure that warning lamp is unlighted.

   Replace Spin-On filter element every 20,000 kilometres.

   See Service Section for details.

Starting the Engine after running out of Fuel

When the engine stops after running out of fuel, there will be air in the fuel line. After the fuel tank is refilled this air must be removed before the engine can be restarted.

1. Set the transmission into neutral.
2. Depress the clutch pedal fully.
3. Turn the ignition key to the "ON" position and crank the engine continuously for 30 seconds.
4. Wait for 30 seconds before starting the engine, in accordance with the "Engine starting procedure" described previously.

Push Starting

DO NOT ATTEMPT TO PUSH START A DIESEL ENGINED VEHICLE. IN AN EMERGENCY IF YOU ARE UNABLE TO START WITH A JUMPER LEAD, CALL YOUR NEAREST DEALER FOR ASSISTANCE.

Model Identification (Diesel)

Model Range	Model Identification	V.I.N. Code Number
Gemini Sedan SL/X	8TF69	8F69

Capacities (Diesel)

	Litres
Engine Oil All Models — Service Refill — Add for Filter	 4.7 0.8
Manual Transmission 5-Speed All Synchromesh	1.6
Rear Axle	1.0
Cooling system Pressure Rating of Radiator Cap	7.0 15 lbs/103 kPa
Fuel Tank	Litres 52
NOTE: Use fluid level for final check.	

Vehicle Dimensions

Item	millimetres
Overall Length	4234
Overall Width	1570
Overall Height*	1344
Wheelbase	2404
Track Front Rear	 1301 1305
Minimum Ground Clearance*	146

*At design load.

Engine Data

Engine Designation	4FB1
Piston Disp. Nom—Cu. Cms	1817
Comp. Ratio	21.0:1
Number Cylinders	Four
Bore/Stroke mm	84.0 x 82.0
Taxable H.P. RAC or SAE	21.45
Kilowatts Gross @ R.P.M.	40 @ 5000
Torque Nm Gross @ R.P.M.	105 @ 2000
Cylinder Numbering (Front to Rear)	1—2—3—4
Firing Order	1—3—4—2

Vehicle Weight Chart (Estimated)

Model	Estimated Kerb Weight kg	Maximum Rear Axle Loading kg	Maximum Loaded Vehicle Weight kg
Gemini SL/X Diesel Sedan	1055	392	1775

NOTE: The estimated kerb weight represents a standard vehicle without options but with a full tank of fuel.

Clearances and Settings

Engine Type	4FB1
Valve Clearance	
Inlet — Cold	0.25 mm
Exhaust — Cold	0.35 mm

Inlet manifold mounting nuts torque:	4.0 kg-m (28ft-lbs)
Outlet manifold mounting nuts torque:	2.5 kg-m (17ft-lbs)
Cylinder head bolt torque:	13.5 kg-m (93ft-lbs)

MAINTENANCE

Engine Oil—Diesel

Use only the recommended engine oils.

Change the Engine oil after the first 1,500 km and then each 5,000 km under normal operating conditions.

If you operate the vehicle under extreme conditions, as shown on page 84 of the owner handbook, the oil must be changed more frequently.

NOTE: Non-detergent and other low quality oils are specifically not recommended. The use of the proper oil and filter change intervals assure you of continued reliability and performance from your engine.

Tyre Pressure

Tyre Size	Condition	Inflation
ZR 78 S13 6P/R	Normal Driving	180 kPa (26 psi)
	High Speed Driving	220 kPa (32 psi)

Important:

See pages 81 and 82 Gemini Owner Handbook for further information on tyres.

Recommended Engine Oils

CC grade

Besco Super Engine Oil
BP Energol HD Oil
BP Vanellus M
BP Super Visco Static
BP Visco 2000
BP Vanellus M Multigrade
Chevron Delo 200 Motor Oil
Chevron Delo 100 Motor Oil
Castrol or Deusol CRB
Caltex Five Star Motor Oil
Caltex RPM Delo 200 Oil
Caltex RPM Delo 100 Oil
Essolube HDX
ENI AGIP F.1 Diesel Gamma
ENI AGIP F.1 Super Motoril
ENI AGIP F.1 Motor Oil HD
Mobil Delvac 1100 Series
Mobil Heavy Duty
Mobil Special
Mobil Delvac ~~Special~~ 1200
Mobil 1
Shell Rotella SX Oil
Shell Rotella TX Oil
Sunoco Sunlube Motor Oil
Sunoco Dynalube Motor Oil
Sunfleet Mil-B
Texaco Havoline Motor Oil
Texaco Ursa Oil Extra Duty
Texaco Ursatex
Total GTS
Total Rubia H
Union Heavy Duty Motor Oil

CD grade

Besco S-3 Engine Oil
BP Vanellus C3
BP Vanellus C3 Multigrade
Chevron Delo 400 Motor Oil
Chevron Delo 300 Motor Oil
Castrol or Deusol CRD
Castrol or Deusol CRF
Castrol or Deusol RX Super
Caltex RPM Delo 400 Oil
Caltex RPM Delo 300 Oil
Essolube D-3
ENI AGIP F.1 Diesel Sigma
Mobil Delvac 1200 Series
Mobil Delvac 1300 Series
Mobil Delvac Super
Mobil Delvac SHC
Shell Rimula CT Oil
Shell Rimula X Oil
Shell Myrina Oil
Sunfleet Super C
Sunfleet Dieselube
Sunfleet Dieselube XD
Texaco Ursa Oil Super
Texaco Ursa Oil LA-3
Total Rubia S
Total Rubia TM
Union Guardol Motor Oil

Maintenance and Service

Maintenance and service should be carried out as laid down in the Guardian Maintenance section of the TE Gemini Owner Handbook (pages 83-115) with the exception of the items which apply to Petrol Engines only.
In addition to the items listed for the various services the following additional items are to be attended to for the Diesel Engined Models.

1 Month — 1,500 Kilometre Inspection & Adjustment — Pages 91-92.

* Replace Oil Filter.

6 Months — 10,000 Kilometre Service — Pages 93-94.

* Check injection pressure and spraying condition.
* Lubricate chassis.

12 Months— 20,000 Kilometre Service — Pages 95-96.

* Check injection pressure and spraying condition.
* Lubricate chassis.
* Replace oil filter.
* Check steering box lubrication.
* Check timing belt.
* Replace fuel filter.

18 Months— 30,000 Kilometre Service — Pages 97-98.

* Check injection pressure and spraying condition.
* Lubricate chassis.

24 Months— 40,000 Kilometre Service — Pages 99-100.

* Check injection pressure and spraying condition.
* Lubricate chassis.
* Replace oil filter.
* Check steering box lubrication.
* Check timing belt.
* Replace fuel filter.
* Adjust valve clearance.
* Check tightening torque of manifold mounting nuts and cylinder head bolts.

30 Months— 50,000 Kilometre Service — Pages 101-102.

* Check injection pressure and spraying condition.
* Lubricate chassis.

36 Months— 60,000 Kilometre Service — Pages 103-104.

* Check injection pressure and spraying condition.
* Lubricate chassis.
* Replace oil filter.
* Check steering box lubrication.
* Check timing belt.
* Replace fuel filter.

42 Months— 70,000 Kilometre Service — Pages 105-106.

* Check injection pressure and spraying condition.
* Lubricate chassis.

48 Months— 80,000 Kilometre Service —
Pages 107-108.

* Check injection pressure and spraying condition.
* Lubricate chassis.
* Replace oil filter.
* Check steering box lubrication.
* Replace timing belt.
* Replace fuel filter.
* Adjust value clearance.
* Check tightening torque of manifold mounting nuts and cylinder head bolts.

54 Months— 90,000 Kilometre Service —
Pages 109-110.

* Check injection pressure and spraying condition.
* Lubricate chassis.

60 Months— 100,000 Kilometre Service —
Pages 111-112.

* Check injection pressure and spraying condition.
* Lubricate chassis.
* Replace oil filter.
* Check steering box lubrication.
* Check timing belt.
* Replace fuel filter.

66 Months— 110,000 Kilometre Service —
Pages 113-114.

* Check injection pressure and spraying condition.
* Lubricate chassis.

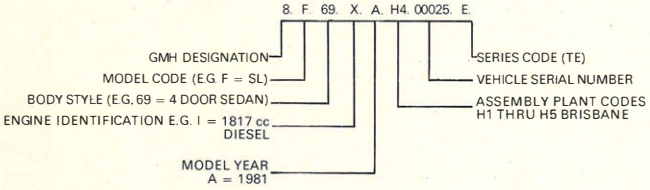
Diesel Specifications

Serial Numbers

V.I.N. Plate
(Vehicle Identification Number)

Attached to the top right hand side (driver's side) of the radiator support panel.

The table below gives a breakdown of the V.I.N. and the meaning of each section.


8. F. 69. X. A. H4. 00025. E.
GMH DESIGNATION
MODEL CODE (E.G. F = SL)
BODY STYLE (E.G. 69 = 4 DOOR SEDAN)
ENGINE IDENTIFICATION E.G. I = 1817 cc DIESEL
MODEL YEAR A = 1981
SERIES CODE (TE)
VEHICLE SERIAL NUMBER
ASSEMBLY PLANT CODES H1 THRU H5 BRISBANE

Vehicle Serial Number (Chassis Number)

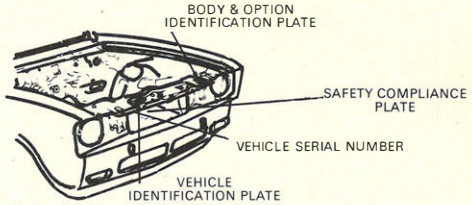
Stamped on the front of the right hand side (driver's side) of the radiator support panel.

Body & Option Identification Plate

Attached to the top left hand side (passenger's side) of the radiator support panel under the engine hood. Plate shows Model Number; Body Number; Trim; Paint; Engine Transmission and Rear Axle Options.

Engine Number

The engine number is stamped on the left hand (passenger) side transmission mounting flange of the engine block.



Safety Compliance Plate

Attached to the radiator support panel beside the V.I.N. Plate. Shows Vehicle Make, Model and Style; Month and Year of production; Vehicle Serial Number; approved seating capacity; and the Australian Design Rules with which the vehicle complies.